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Towards the Second Century of Archaeology in Sri Lanka
on 7th–13th July 1990,
Colombo.

Volume 1

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PREFACE

The International Seminar titled "Towards the Second Century of Archaeology in Sri Lanka" is organised by the Department of Archaeology in order to commemorate the event of the establishment of the Department of Archaeology of Sri Lanka in 1890. The papers of the present publications are the contributions by the invited delegates to the seminar from the seven SAARC countries and the international community of South Asian Archaeology. The themes of the seminar are as follows: a. Letters, Literature and Archaeology b. Man, Environment and Archaeology c. Science, Research and Archaeology d. Culture, Tourism and Archaeology. In this connection it may be mentioned that due to lack of time and the delay in the submission of papers, the organising committee was compelled to published unedited versions of papers in order to complete the publication opportunity to participate actively in the forthcoming deliberations. However, it has been decided to publish an edited version of the proceedings later. The diacritical marks which have been omitted due to technical reasons will be included in the final print. Any inconvenience caused to the authors and the readers in this regard is very much regretted. Finally, the organising committee takes this opportunity to thank all the delegates who made their contributions in time accepting our invitation. We also extend our thanks to all the members in the department and our friends and wellwishers who helped in various ways to get this publication in a successful manner.

Organising Committee.
KING MILINDA'S CONVERSION TO BUDDHISM
FACT OR FICTION?

By
Osmund Bopearachchi

Menander was no doubt the most important Greek king that ever ruled in the Indian territories. He was the only Greek king in India who made a clearly identifiable appearance in Indian literature, and his reputation as a good king gave rise to legends that stirred some of the classical writers. However, two contradictory versions are given about the death of Menander by the Pali and Greek texts. At the end of the Pali *Milindapanha*, it is said: "... afterwards, taking delight in the wisdom of the Elder, he (Milinda) handed over his kingdom to his son, and abandoning the household life for the houseless state, grew great in insight, and himself attained to arhatship." The Greek account of Menander, that of Plutarch, concerning the manner of the king's death is different. We learn from Plutarch that Menander's death was sudden: "When a certain man named Menander, who had been a good king of the Bactrians, died in camp ...."

Our aim here is to reexamine, in the light of other literary sources and numismatic evidence, the question of Menander's involvement with Buddhism. We try to answer at the same time to the following questions: Should we accept or dismiss the idea that Menander became Buddhist in the sense of entering the Buddhist order? What political reasons motivated him to be interested in Buddhism?

The most informative written source about Menander is the *Milindapanha* "The Questions of King Milinda." The main purpose of this work is doctrinal; it relates a conversation alleged to have taken place between king Milinda (Menander), chief of the Yonaka (the Greeks), and the Buddhist sage Nagasena on the nature of the soul, on the Eightfold path, and on the liberation from the wheel of birth. It is usually believed that the book was written in Northern India, not later than a century and a half after the death of Menander. It is also believed that it was originally written in Sanskrit or in some north-Indian Prakrit. The original book is lost in the land of its origin, but there exist two versions of this work. One is a Pali version translated in Sri Lanka. From Sri Lanka it was transferred, in its Pali form, to both Burma and Thailand. The original Indian Sanskrit or Prakrit text was three
times translated into Chinese in the 3rd, 4th and 5th centuries of our era. Of these translations, two recensions of the second version have come down to us, called in Chinese "Sutra of the bhiksu Nagasena". Sylvain Levi followed by many scholars, especially L. Finot, have generally agreed that the Chinese version corresponds to the authentic text and concluded that the first part of the Pali Milindapanha, of which only the second and the third books and a small part of the first, appear to be authentic. Books IV-VII were added at different times in Sri Lanka, book IV having existed there since the 5th century A.D. If we accept this hypothesis, it is obvious that one cannot attach a great importance to the story given at the end of the second part of the Pali Milindapanha. V. Trenckner argued that since the Pali version added a marginal note to the effect that the whole of this passage according to which Menander retired from the world and handed his throne to his son was derived from a manuscript brought from Siam, so it belongs to a spurious supplement and should be considered as a work of a different hand. It is noteworthy in this context that the Chinese version, considered as a faithful translation of the authentic text, ends simply: "Ayant fini de parler, Na-sien desira partir. Alors le roi se leva et salua Na-sien".

If we take the contents of both Greek and Chinese versions into account there is no reason to believe in the story narrated by the author of the second part of the Pali Milindapanha. However Rhys Davids, against the general belief, argued that both part I and part II are the work of a single author: "Both M. Specht and M. Sylvain Levi seem to think that the two Chinese books were translations of older recensions of the work than the one preserved in Pali, This argument does not seem to me, as at present advised, at all certain. It by no means follows that a shorter recension, merely because it is shorter, must necessarily be older than a longer one. It is quite as possible that the longer one gave rise to shorter ones."

Even if one may admit that both parts of the Pali Milindapanha was the work of a single author, the numismatic data which form a major criterion for the understanding of Indo-Greek history, contradict the peaceful conclusion given by the second part of the Pali Milindapanha, in favour of the Greek historian Plutarch's version according to which king Milinda's death was sudden and unexpected.

It is generally agreed that Agathoclea whose name and portrait appear on a number of coins in association with those of her son Strato was the wife of
Menander\textsuperscript{11}. When the coins of Agathocleia are set in a chronological sequence, we can indeed observe that Agathocleia, Menander's widowed queen, was regent during the infancy of her son Strato\textsuperscript{12}.

A. On the first series of coins the portrait of Agathocleia together with her name and Greek appears on the obverse: \textit{ΒΑΣΙΛΕΣΙΣ ΑΓΑΘΟΚΕΙΑΣ}, while the name and titles of Strato in kharoshthi, without portrait, are relegated to the reverse: \textit{Maharajasa tratarasa dhramikasa Stratarasa}\textsuperscript{13}. On the next issue, she takes the title "\textit{ΘΕΟΤΡΩΠΟΣ}" (pl. 1, no 13).

B. In the second stage the portrait of Agathocleia occurs in association with that of Strato, with the legend in Greek \textit{ΒΑΣΙΛΕΟΣ ΕΩΤΡΟΣ ΣΤΡΑΤΡΟΣ ΚΑΙ ΑΓΑΘΟΚΕΙΑΣ} and on the reverse, appears the legend in kharoshthi \textit{Maharajasa Tratarasa dhramikasa Stratarasa Agathukriye} associated with her husband's monetary type Athena Alkidemos\textsuperscript{14}. In the next series her name disappears from the kharoshthi legend (pl. 1, no 14). Thus the numismatic evidence shows how, with the growth of her son, Agathocleria gradually ceases to be queen - regant, until her portrait and her name disappear completely from the coinage.

In spite of the fact that she was the legitimate wife of Menander, she does not seem to inherit any of her husband's mints. The two monograms \textit{σφ} and \textit{φθ} which she uses on her coinage were introduced during her regency (see below table 1). It would seem therefore that she inherited none of her husband's territories.

The only monogram \textit{φ} which is common to Menander and Strato 1, appears only on the latter's coins characterized by a middle aged portrait (pl. 1, no 20). Upon close examination, Strato's coins can be divided into many chronological phases. The multiplication of titles in the legend correspond to the correlative ageing of the royal portrait:

1."Soter" = \textit{tratara}, with young face (pl. 1, no 17);
2."Soter Dikaios" = \textit{tratara dhramika} (pl. 1, nos 18 & 19);
3."Epiphanes Soter" = praca cha tratara with a middle-aged portrait (pl.1, no 20).
It is obvious that Strato I could only recover the geographical area represented by the monogram \( \mathfrak{H} \) at the end of his reign. Who was then the contemporary of Agathocleia and Strato I Who succeeded Menander in the major part of his possessions?

Five of Menander's monograms \( \mathfrak{M} \), \( \mathfrak{E} \), \( \mathfrak{K} \), \( \mathfrak{T} \) and \( \mathfrak{h} \) appear on the coins of Zoilos I (see below table 1), who represents Heracles as the predominating type of his coins (pl. 1, nos 15 & 16). It is then this Zoilos I who did gain control of Menander's territories. His use of three monograms \( \mathfrak{K} \), \( \mathfrak{E} \) and \( \mathfrak{K} \) which characterize the issues of Antimachos Nikephoros, Eucratides I and Menander in the Paropamisadae and Arachosia, is very significant in this respect. The following table sums up the chronological order of Menander's immediate successors.

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<td>( \mathfrak{M} ) ( \mathfrak{E} ) ( \mathfrak{K} ) ( \mathfrak{T} ) ( \mathfrak{R} )</td>
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<tr>
<td>AGATHOCLEIA</td>
<td>( \mathfrak{K} ) ( \mathfrak{E} )</td>
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<tr>
<td>ZOILOS I</td>
<td>( \mathfrak{M} ) ( \mathfrak{E} ) ( \mathfrak{K} ) ( \mathfrak{T} )</td>
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<td>STRATOL</td>
<td>( \mathfrak{R} ) ( \mathfrak{K} ) ( \mathfrak{E} ) ( \mathfrak{I} )</td>
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Table 1

We are thus almost certain that Zoilos I, along with Agathocleia and Strato I, was the immediate successor of Menander. Other than the monograms common to both kings, another valuable argument can be added. In two hoards found in the area of Bajaur, hundreds of coins of Apollodotos I, Antimachos Nikephoros and Menander are associated with a very small number of Zoilos I's coins, 1 coin in the first and 4 in the second. This small number, in contrast with the large number...
of coins of the predecessors of Zoilos I gives a clear termi

One may assume that Zoilos I on the one hand and Agathocleia associated with her son Strato I on the other hand came to power at the same time in different territories, broadly Zoilos I in the Paropamisadac and Strato I in Gandhara (Taxila = तांका). If Menander died in camp as Plutarch said, his reign would have come to an end unexpectedly. Was Zoilos I the rival king who is responsible for Menander's death? Did Zoilos I by figuring Heracles as the predominating type of his coins like those kings Euthydemos I, Demetrius I and Euthydemos 11 who reigned in Bactria, wish to manifest that he belongs to the Euthydemos royal family? In order to answer these questions, one has to examine whether the political upheaval in the territories north of the Hindu Kush mountains had any consequences over the developments in the Indian territories.

On the basis of archaeological data from the Ai Khanum site in Afghanistan, the French excavators showed that once the Greek establishments of the city were burnt down the Greek settlers who had fled away never returned. One is therefore led to assume that the cause for this tragedy was an invasion by the peoples of the steppe, which occurred precisely at a time when Chinese records mention large scale movements of tribes travelling westwards from north-west China and southern Siberia. The Chinese imperial Annals (the Shih-chi and the Han Shu) provide us with texts based on a report made by a certain Chan-K'ien, an envoy of the Han emperor Wu Ti to the Western provinces between 138 and 126 B.C. He tells us about the arrival of the Yueh-chi in Central Asia in the second half of the 2\textsuperscript{nd} century B.C., a conquest which took place progressively in two stages\textsuperscript{18}. The numismatic data provided by the Qunduz and Ai Khanum hoards would thus corroborate the progressive stages of their advance. In the first stage, the Yueh-chi nomads must have taken northern Bactria on the right bank of the Oxus, and the eastern extremity of the plain of Bactria, including Ai Khanum. The second stage of this move towards southern Bactria must have already been completed at the time of the visit by the Chinese ambassador Chang K'ien in these regions in 129-128 B.C.\textsuperscript{19}. Heliocles I, the successor of Eucratides I was the last Greek king to reign in Bactria, and the nomad invaders continued to imitate his coins along with those of Eucratides I. The final nomadic assault must have expelled all the Greek noble out of Bactria. I am inclined to think that like Heliocles II, Zoilos I was one of those "chiefs" who was forced to abandon Bactria, and invade Indian territories at the detriment of the other
Greek kings. If our hypothesis is exact we have to reject once for all the idea that Menander joined the Buddhist order leaving his kingdom to his son, and admit that Menander died during the battle with Zoilos I, leaving his widowed queen with her child.

Once the idea that Menander did not give up his kingship to become a Buddhist monk is dismissed, should we also reject at the same time the hypothesis that Menander stood very close to Buddhism? The answer is no. The evidence of the Greek historian Plutarch in this respect is decisive: he says that when Menander, who had been a good king died in camp, "... the cities celebrated his funeral as usual in other respects, but in respect of his remains they put forth rival claims and only with difficulty came to terms, agreeing that they should divide the ashes equally and go away and should erect monuments to him in all their cities". Menander's reputation as a pious man gave rise to a legend. This episode reminds us of a passage in the Maha-parinibbana sutta in Dighanikaya, the famous dispute that took place among the Indian kings to divide up the ashes of the Buddha in order to deposit them in a series of stupas. There is no proof that Menander was converted to Buddhism. Nevertheless it is not impossible that, even if the Greek king was not himself a member of the Buddhist order, he might have been a great benefactor of this dhamma. The wheel (chakra), on an isolated copper coin may be interpreted as a discreet allusion to his personal belief (pl. I, nos 10 & 11). The chakra would have represented for him the Buddhist emblem as well as the lay symbol of the chakravartin, the universal monarch par excellence according to Indian tradition. His celebrity appears to have spread to distant lands. The Mahavamsa, the great chronicle of Sri Lanka, among the foreign delegations who were invited by the Sinhalese king Dutugamunu, a close contemporary of Menander, for the inauguration of the great stupa Ruwanvali Dagoba, the Mahar etc. mentions Buddhists from Greek territories: "and from Alasanda the city of Yona "yonanagaralasanda", came the thera Yonamahadammarakita with thirty thousand bhikkhus". The name of the Buddhist monk and the number of the delegation is of course subject to usual exaggeration, but one cannot ignore the fact that there was an important Buddhist community in the Greek territories at that time. A Buddhist reliquary found in Bajaur, with an inscription bearing the date of the 14th year of the reign of Menander, is very significant in this connection.

It is worthwhile, at this point, to ask the question, what really made Menander
interested in Buddhism? Was it a genuine feeling or were there any political or psychological motivations behind it? There is very clear evidence to show how the Greeks when reigning in regions of Indian culture adapted their policies according to given circumstances.

Relying mainly on numismatic evidence, minting techniques, iconography and metrology, the issues of Agathocles and Pantoleon are to be considered the oldest of all the bilingual coins ever circulated in the territories of Indian culture. These two kings while remaining true to the traditional Greek attic-standard coinage meant for circulation in Bactria with their monolingual reverse legends, and type: Zeus holding Hecate (pl. 1, nos 1 & 2), introduced a bilingual coinage meant for circulation in Indian territories. They should be credited with creating the first bilingual coinage, reflecting the originality and the boldness of their monetary policy. When they came to minting coins for subjects whose culture always appeared more foreign to a Greek than that of a any other country, they decided not only to proclaim themselves kings to them in their own language and in the two scripts (brahmi and kharoshthi) they used, but also to represent in their issues images of their gods.

The most important feature of these coins is their purely indigenous iconography: remarkable types indeed are the ones represented on the bilingual silver coins of Agathocles found in the Ai Khanum excavation. The two male figures, identical in pose and dress, but having different attributes are identified as Samkar-Sana holding a plough and Krishna-Vasudeva holding a large wheel of six spokes. The image of a goddess holding a lotus represented on the bronze of Agathocles (pl. 1, nos 3 & 4) and Pantoleon (pl. 1, no 5) is on the other hand considered by certain historians art to be Ekanamsa or Subhadra, Krishna's own sister, or as Lakshmi, the goddess of fertility, and plenty for whom the lotus is the normal attribute. These images are in fact virtually the most ancient we have of these Indian deities.

The second testimony in connection with the Greek involvements with Indian religion comes from an inscription engraved on the famous Besnagar column which stands near the site of the ancient Vidisa. This monument, which, as its designation (garudadhvaja) indicates, originally supported a statue of Garuda, Vishnu's sacred bird, was erected in honour of Vasudeva, the god of gods, by a Greek from Taxila,
Heliodorus son of Dion, ambassador of the great king Antialcidas to the local king Bhagabhadrada the Saviour. In his dedication, the Greek proclaims himself a 'devotee of the Lord-god' and in witness thereof he has had engraved additionally his profession of faith, summarized in the three typically Indian cardinal virtues, viz. piety (dharma), self-denial (tyagah) and consecrated activity (apramada), the same as the ones preached by the Krshnaic teaching of the Bhagavadgita.

The existence of the Bhagavata cult, popular among the Greeks, as early as the 2nd century B.C., as witnessed by the Heliodorus' dedicatory inscription and the coins depicting the iconographic representations of the divinities belonging to the same cult, minted by Agathocles and Pantaleon who reigned about 80 years before, suggest that the Greeks in India were able to establish friendly relations with the Indians inspiteof their different beliefs.

What compelled Menander to favour Buddhism rather than Hinduism? We believe there were good political reasons for it. Two classical authors, Strabo and Justin, by their allusions to better known historical events of that period, talk about Menander as a conqueror of India. Strabo (XI, xi, 1) quoting from Apollodoros says that Menander advanced as far as the Jamna. Although none of the Indian literary sources mentions Menander as conqueror of India, fortunately there are several Indian texts which refer to an invasion of the Middle kingdom, by the Greeks (known to Indians as Yavanas) which can be associated with Menander's expedition. Our main source of information is the Yuga Purana. It is a chronicle interpolated into a handbook of astrology, the Gargi Samhita, written in the form of a prophecy, which is thought to derive from an actual historical chronicle written in Prakrit no more than a century after the events of which it tells. The Yuga Purana, describes how the Greeks advanced up to Pataliputra: "After this, having invaded Saketa (a city of Kosala, close to Ayodhya), the Pancalas (Doab) and Mathura, the viciously valiant Yavanas (Greeks) will reach Kusumadhwaja (Pataliputra)"29. Another Indian source that confirms or amplifies the information on the Greek invasion which is preserved in the Yuga Purana, is the Mahabhasya by Patanjali, the grammarian and commentator on Panini30. The work contains two sentences illustrating the use of the imperfect tense in Sanskrit to denote a recent event: Arunad Yavannah Saketam "The Yavana was besieging Saketa"; Arunad Yavano Madhyamikam "The Yavana was besieging Madhyamika". It is usually agreed that the Mahabhasya was written c. 150 B.C.31. If this was so, we have to place the Indian conquest of Menander more
or less at the same time. Meanwhile there is another source which has a bearing on Greek military actions in North-Central India. This is Kalidasa's play, Malavikagnimitra\textsuperscript{32}, which preserves a memory of a conflict on the banks of a river where a Yavana force was defeated by Pusyamitra's grandson Vasumitra during the reign of the former, who dies according to Indian Puranas c. 150 B.C. All these sources seem to refer to a single invasion, which would have been directed against the rising Sunga power. We know that Pusyamitra Sunga who murdered the last Maurya and seized the crown was a devotee of the Brahman religion, which he therefore naturally desired to see restored as the religion of his realm. The matter at once became concern to every Buddhist in India who under the Mauryas enjoyed State favoritism. Indian Buddhists may have looked upon Menander as their saviour and protector against the rising Sunga power.

The Milindapanha contains no doubt a good deal of actual facts in its historical setting. Menander's encounter with Nagasena at Sagala was not accidental. We are told in the Milindapanha that Menander in his utter desperation was looking for someone to talk to in order to dispel his doubts: "All Indian is an empty thing, it is verily chaff! There is no one either recluse or Brahman, discussing things with me, and dispelling my doubts. The cause for Menander's desperation is partly psychological, and we have discussed elsewhere the reasons for it,\textsuperscript{34} but let us recall them briefly.

Menander ascended the throne in the city of Alexandria of the Caucasus in the Paropamisadae where all his predecessors such as Antimachos Nikephoros and Apollodotos I had reigned. We make this assumption on the basis of two facts, firstly, the Milindapanha says that Menander was born in Begrām-Kavisi, and secondly, his first issues were minted and found only in the western territories of the Indo-Greek kingdom. Menander's military campaign against the Sungas, that we have evoked earlier, was launched immediately after he ascended the throne. While Menander was deeply engaged in the war against the Sunga empire, Eu克拉底斯 I, who had been the king of Bactria for a long time, crossed the Hindu Kush mountains and conquered the kingdom of Menander. Hearing the news about the terrible and ferocious war which broke out among the Greeks themselves in his own country, according to the same Yuga Purana\textsuperscript{35}, Menander made a hasty retreat and tried to reconquer his kingdom, but failing to do so he took refuge in Sagala. This was the real political reason for Menander's desperation. Hearing about Nagasena's
wisdom Menander met him and discussed various doctrinal problems of Buddhism with him. However it is clear from the numismatic evidence, that Menander, a few years later, was able to reconquer his lost territories. We learn from Justin (XLI, 6) that Eucretides was assassinated by his own son who shared the kingship with him. At that moment Menander decided to take advantage of this political unrest to re-conquer his lost kingdom.

At the end of the authentic version of the Pali Milindapanha we learn the real reason why Menander refused to give up his kingship to become a monk. After the long, convincing conversion, Nagasena asks himself: ... though king Milinda is pleased he gives no sign of being pleased". Menander says in reply: "As a lion, the king of beasts, when put into a cage, though it were of gold, is still facing outside, even so do I live as master in the house but remain facing outside. But if I were to go forth from home into homelessness I would not live long, so many are my enemies."

In conclusion, one may thus assume that there is no reason to believe that Menander gave up the kingdom and entered the Buddhist order. Other than the unique copper piece bearing the Indian emblem "chakra" (pl. nos.10 & 11), none of Menander’s coins, known to us through thousands of specimens and 38 different types, shows decisive signs of his conversion (see pl. nos.6 - 9, 12). Menander remained Greek until he was killed in the battlefield. As Rhys Davids correctly pointed out, when the author of the Pali Milindapanha says that Milinda was converted to Buddhism he may be inventing for his own purpose. Nevertheless, one cannot deny the fact that Menander stood close to Buddhism, as a protector and a benefactor of this dhamma. It was his kingdom that two hundred years later, under the supremacy of the Kushana, became the cradle of Graeco-Buddhist art.
1. There were no doubt two Greek kings in India named Menander, one Soter and the other Dikaios, see A.N. Lahiri, Corpus of Indo-Greek Coins, Calcutta, 1965, p. 160, also in the Journal of the Numismatic Society of India, 1958, p. 73 - 75 ; see also O. Bopearachchi, "Menandre Soter, un roi indo-grec. Observations chronologiques et geographiques", Studia Iranica 1990 (now in print). Here and all along the simple designation "Menander" is meant for Menander Soter.


3 Moralia, 821, trans. H.N. Fowler, 1936, p. 278.


7 L. Finot translated into French the part that he and many other scholars considered as the version corresponding to the authentic text: Les Questions de Milinda, Paris, 1923, see p. 1-11.

8 Milindapanha, Introduction, p. V and VI.

9 BEFEO, 24, p. 180.

10 Questions of King Milinda, part 11, p. XII. However Rhys Davids did not believe that Milinda was converted to Buddhism.

11 A. Cunningham (CASE, p. 256) thought that the connection between Strato and Agathoclea could only be that of man and wife or king and queen. A. von Sallot (Zeitschrift fur Numismatik, 1879, p. 128-9) showed that they were mother and son.

12 We have justified in the light of coin overstrikes the chronological order usually attributed to Agathoclea as the immediate successor of Menander and the predecessor of Heliocles 11, "Monnaies indo-grecques surfrappées" Revue Numismatique

2 S.P.C. 90683
1899, p. 55-59.


14 The predominating reverse type of Menander (see pl. 1, nos. 6 & 12), Athena Alkidemos brandishing thunderbolt, was correctly identified as Athena Alkis by W.W. Tarn (GBI, p. 349, n. 5). According to A.B. Brett, "Athena Alkidemos of Pella", American Numismatic Society, Museum Notes 1950, p. 55-72, this monetary type was a faithful copy of the statue of Athena Alkidemos, which stood in the temple of Pella.

15 It is noteworthy that the coins of Zoilos I, in all the known cases, were found in the Paropamisadae and in Arachosia 11 specimens in the Cabinet des Medailles and 5 in the Kabul Museum all from the Mir Zakah deposit; 5 drachms from the two Bajaur hoards (An Inventory of Greek Coin Hoards, New York, 1973, nos 1845 and 1846).

16 In Bajaun 1 (IGCH, no. 1845) : 1 drachm = Mitchiner 2, 256, ..., in Bajaun 11 (IGCH, no. 1846) 4 drachms (Mitchiner, 256).

17 On the attribution of this monogram to Taxila, see the convincing arguments put forward by G.K. Jenkins, JINS 1955, p.13-14; A.D.H. Bivar, Numismatic Chronicle 1965, p. 84; O. Bopearchechi, RN 1989, p. 68.

18 We use the translation by B. Watson in Records of the Grand Historian of China translated from Shih chi of Sau-ma chien, vol. 11, London, 1961: "The Great Yueh-chi live some two or three thousand li west of Ta-Yuan, north of Kuei River they are a nation of nomads, moving from place to place with their herds and their customs are like those of Hsiung-nu. They have some one or two hundred thousand archer-warriors" (p. 267, ch. 123), "...after they were defeated by the Husing-nu they moved far away to the west, beyond Ta-Yuan; there they attacked and conquered the people of Ta-hsia, ..." (p. 268, ch. 123). "... they (the Yueh-chi) attacked and conquered the people of Ta-hsia (Bactria) and set up the court of the king on the northern bank of the Kuei river (Oxus)" (p. 268 ch. 123). "After the Great Yueh-chi moved west and attacked and conquered Ta-hsia, the entire country came under their sway" (p. 269, ch. 123).

19 See the remarkable study on this question by P. Bernard and H.P. Franfort, Etudes de geographie historique sur la plained'Ai Khanoum (Afghanistan), Paris, CNRS, 1978.


22 Ch. Masson was the first to publish this coin in his collection, Journal of the Asiatic Society of Bengal 1836, pl. XLVII, 7; since then it has been mentioned by many scholars, especially: A. Cunningham, CASE, pl. XII, 13, p.274; P. Gardner, BMC, Menander, no 73, pl. IV, 11; P. Demieville, BEFEO 1924, p. 35; La Vallee Poussin, L'Inde aux temps des Mauryas ..., Paris, 1930, p. 148; W.W. Tarn, GBI, p.262 - 264: A.K. Narain, IG, p. 97 - 98; Mitchiner 2, 241.

23 A. Cunningham (CASE, p. 274) evoked the possibility of these two interpretations; W.W. Tarn (GBI, p. 263) preferred "supreme ruler". Also see A. Foucher, "A propos de la conversion au bouddhisme du roi indo-grec Menandre", Academie des inscription et Belles-lettres, XLIII, 1943, p. 259-295.


27 Ibid., p. 9, fig. 1 and p. 13, fig 5.


31 M.A. Mehenendale in The Age of Imperial Unity (The History and Culture of the Indian People), Bombay, 1951, p. 269.

33 Questions of King Milinda, p. 10.

34 See O. Boparchchi, "Menandre Soter ...", loc. cit.

35 Kern op. cit., p. 38, and Jayaswal, loc. cit., p. 411.

36 Milindapanho, III, 7.

* Coin photographs are in natural size, except No.11 which is an enlargement of No.10. I am extremely greatful to Mrs. C. Morrrison, Director, Cabinet des Medailles of Paris and Mr. Joe Cribb, Curator, the British Museum, London, for kindly authorizing me to publish them.
Pl. 1, Nos. 1, 3, 4 Agathoclis; Nos. 2 & 5 Pantaleon; Nos. 6 - 12 Menander; Nos. 13 & 14 Agathocleia and Strato I; Nos. 15 & 16 Zoilos I; Nos. 17 - 20 Strato I.
THE EXCAVATION OF MANTAI

By

John Carswell

The excavation of Mantai is a record of failure-failure to understand the true significance of the site, failure to interpret the extremely subtle evidence that remains, and failure in the face of logistic, personal and political difficulties beyond the power of the archaeologists to control. This is no new situation, for these difficulties appear to be inherent in this particular site, and in a way they are also an important part of the record. After a hundred years or more, Mantai still keeps its secrets; but as a result of three recent campaigns, we have inched closer to a more precise definition of the spatial and physical characteristics of this most extraordinary site. The publication of Mantai, now in the final stages of preparation, has a three fold aim. First, to document in detail what was accomplished by previous excavators during the past century; second, to define the site as it appeared to us during our recent, though imperfect, excavations; and third, to present a detailed catalogue and interpretation of the new evidence from Mantai. But beyond all else our major objective is to provide a springboard for future excavators, a tabula rasa as it were, for the next generation of Sri Lankan archaeologists—who knows, as yet unborn?

Following the sequence outlined above, a brief history of Mantai since it was abandoned as a result of the Chola onslaught a millenium ago provides a springboard for an account of our own activity. When it ceased to play a crucial role as the leading maritime emporium of South Asia in the early eleventh century, Mantai swiftly reverted to nature; the presence of a scattering of Chinese Song dynasty sherds on the surface of the site indicates that it did not entirely collapse, but rather disintegrated. We found no evidence of a final conflagration or deliberate destruction of the site, and it is highly likely that it limped along with a diminished economy until gradually swallowed up by the scrub jungle, and the departure of its flourishing international mercantile community for fresh pastures across the water. Perhaps more significant must have been the breakdown of the irrigation system throughout the dry zone, for this would most effectively have removed any agricultural surplus and economic capital for trade.

When the Portuguese arrived in the late sixteenth century, Mantai was little more than a source of readily dressed stone, which could be quarried for the new
fort at Mannar. Subsequent travellers noted remains of brick structures, a tank, and the discovery of Roman coins in the area, so there was a general consciousness that it was an ancient site. But it was not until 1887 that W.J.S.Boake visited the site and systematically, if somewhat simplistically, recorded the presence of part of a moat, a large palatial building, old streets and wells, and "a few fragments of sculptured figures, broken tiles, and pieces of pottery." His own modest excavations, were hampered by the surprising hardness of the ground, but he did find remains of a brick structure, and examples of Far Eastern glazed ceramics, Near Eastern glass, a variety of beads, glass bangles, local earthenware, cowries, sawn chank shells, copper and iron slag, and much local earthenware pottery. Unimpressive though his finds were, he at least appreciated Mantai's historic significance, and included in his report a translation of Suntaramurrti Nayanar's sixth-century epic describing the delights of Tirukkestisvaram (Mantai).

His successor was John Still, who in his capacity as Assistant Archaeological Commissioner made a survey of the area in 1907 and noted brick remains, Pandyan and Chola coins, glass and shell bangles, glazed pottery, a stone pillar deposited at Mannar of the period of Sena II, dated 878 A.D., and a number of smaller statues. He also excavated at Mantai, where his finds duplicated the kind of material recorded by Boake, and in addition the remains of a small statue of the Buddha, he also noted a rival excavation, by a group of wealthy Tamils, who had employed 300 workmen for six months to find the reputed location of a lingam. Still's final verdict was that Mantai was "a disappointing place".

Twenty years later, after the first World War, A.M. Hocart mounted another campaign at Mantai. In 1926 he undertook to clear and survey the site, and in his subsequent report succinctly appraises the problems of Sri Lankan archaeology, and Mantai in particular. This is far ahead of its time, and worth quoting in full:

"What is wanted first of all is a stratified site, because there alone can we establish our chronology. Stratified sites are not common in Ceylon owing to the shallowness of the soil, and washaways, and above all the habit of building on rock. Mantai is one of the few, but it is an exceptionally good one, for there are nine feet of debris and may be a great deal more. ... The excavations have further been very much complicated by previous so-called excavations which consist of digging holes and throwing up earth on the site."
We had to spend a fair amount on removing the debris before we could do any work. The stuff coming form these spoil mounds is more interesting than what came from our excavations, but is useless since its original position is not known."

Hocart photographed the site and his work in detail and returned again in 1927, with an increased labour force. Overwhelmed by the sheer quantity of local earthenware - here he is prophetic of our own dilemma - he also bemoans lack of draughtsmen, so he is still recording his previous season's work. He did, however, plan a major building at the centre of the site, and provided a further series of photographs. Back again in 1928, with arduous working conditions, his labour force began to defect. At one point he dug 19 feet below the surface, and although "minor changes in the pottery were noticed ... if the lower strata are as ransacked as the upper ones another two years will have got out of the mound all that it is likely to yeild, namely a pottery and bead sequence" Again, photos accompanied his report. Hocart took ill, and returned to England without ever returning to Mantai.

It was not until after the second world war that any fresh interest developed. S. Sanmuganathan excavated a pottert ring-well and two stone lined wells, one of them to 32 feet below the surface to the water level. He also found Roman and Near and Far Eastern ware, beads, and a miniature ivory chariot now in the Anuradhapura Museum. He also found an intact burial on a slope outside the ruins, the area covered with material including Roman Arretine sherds, and others dusted with gold, silver and mica. Sanmuganathan excavated again in 1951, reaching virgin soil in a number of places, and although there were no significant architectural remains he found Chinese and Islamic ware, and "objects furnishing evidence of the intercourse with Rome". Excavations were then resumed by the Archaeological commissioner, Dr. Raja de Silva; these, however, have not yet been published, though much of his material recovered along with that of previous excavators lies in the depot of the Archaeological Commission at Anuradhapura. His deep trenches lay within the general area at the centre of the mound previously worked by Hocart, and were to prove invaluable to us by providing easy access to the lowest levels of the site.

Apart from actual excavation, the importance of Mantai impinged on various scholars' consciousness in the succeeding years. In 1960, William Willetts visited the site, and collected a great deal of surface material. As he subsequently reported, "the
paramountancy (of Mantai) among the ports of the island is indisputable. Whether the Pamban or Mannar channels were navigable at all periods in its history as a port, or whether, as has been suggested, goods in transit had to be transhipped and carried overland across the isthmus between Mantai and some port south of Mannar Island, makes no difference. The actual finds at Mantai, plus the wealth of historical references to it in the Chronicles and various foreign texts, prove it to have been without doubt the emporium for the island. Mantai is crying out for systematic excavation."

In 1973, in a seminal paper on Sasanian maritime trade, Whitehouse and Williamson suggested Mantai was the principal port of Sri Lanka mentioned in the sixth century A.D. by Cosmas Indicopleustes. The port had a Nestorian community, and they noted the discovery of a Nestorian stone cross, now in the museum at Anuradhapura.

This, then, was the situation some fifteen years ago, when the present researcher first visited the site. Here I should confess that it was not my primary target when I arrived in Sri Lanka in 1974 on my way to investigate the Maldives, and I was led to Mantai simply by a chance encounter with a petrol pump attendant when I landed in Mannar from South India. A preliminary visit to the site as a direct result of this conversation - the petrol pump attendant was in fact a knowledgeable history graduate of Colombo University (the pump belonged to his family) revealed what so many previous visitors had also noted, a plethora of Chinese ceramics all over the area. As my major interest at that time was the export westwards of Chinese ware, I notched up Mantai as a site worthy of further study.

It was not, however, until six years later that I was able to return to Mantai and investigate it in depth. During the intervening period I had concluded my study of the Maldives and the role they played in international maritime commerce, and surveyed much of the coast of India and Sri lanka, charting ports mentioned in classical, Islamic and Chinese sources. I had also found a major hoard of Chinese ceramics of the song dynasty in a sand dune on Kayts Island, near Jaffna; and excavated a tiny coastal site south of Vankalai, near Mannar on the west coast of the Island, with a conjunction of 12th century A.D. Islamic, Chinese and local ceramic material. After almost a hundred years of speculative digging and abortive investigation, Mantai was an obvious choice for a scientifically controlled
excavation; and thanks to the generous permission of Dr. Roland Silva and the funding of a number of International agencies, that possibility was finally realised in 1980. When we embarked on our excavation in that year, little did we guess the sorts of difficulties we would encounter. As I said at the beginning, our three seasons at Mantai were far from completely successful; but nor, should I hasten to add, were they a total failure.

Here perhaps is the moment to describe the site as we found it ten years ago. First of all, is the significance of its location. It lies athwart the main maritime trade route between the Near and Far East, and it is also strategically placed on a north-south axis, at the point for any incursions from mainland India. This importance is further reinforced by the fact that it is situated at the southern extremity of Adam’s Bridge, the string of underwater reefs and islands which effectively prevent the passage of shipping of any size between India and Sri Lanka. This means that it became a point of contact and interchange for ships both from the Near and Far East, before vessels became large and sophisticated enough in design to sail the notoriously dangerous waters off the south coast of Sri Lanka.

As far as the littoral is concerned, Mantai lies on an old estuary of the Aruvi Ari river, which would have once linked it to the inland capital at Anuradhapura. Anuradhapura would have lain approximately two days journey by land to the south, and the symbiotic relationship between the two cities must have been crucial to the development of Mantai as an international trading emporium. We have no idea of the organisational and political structure which would have made Mantai dependant on Anuradhapura; but it is clear that only the excess capital derived from the successful agricultural exploitation of the northern dry zone with its complex irrigation system could have generated Mantai’s success. There must also have been a remarkable system of urban control to allow foreign merchants to establish themselves securely within the framework of the city.

In physical terms, a striking feature of the site is the fact that it exists at all. Surrounded by a virtually intact deep double moat, Mantai is horseshoe-shaped and has a depth of deposit up to ten metres. Most sites in the monsoon belt of South Asia are eroded by the twice-yearly monsoons, which prevent any accretion of material. But Mantai has less than 40” of rainfall a year, lying just out of the path of both the south-west and north-east monsoons, and as a result there is a mound of
archaeological debris covering an area of over 48 hectares. However, this is not to suggest that Mantai is not subject to the climatic problem inherent in all investigation of sites lying within the monsoon belt. With intense humidity if not actual precipitation and relatively high temperatures, an organic material is bound to perish. This means that the archaeological record is limited to non-organic material, and is highly imperfect in documenting a comprehensive picture of the wide range of materials which much have been traded at Mantai in its capacity as an international emporium. That this is so can be seen from a compilation of records of goods known to have been traded in the general area of South Aisa by the Chinese during the Song dynasty, and a couple of centuries later; the materials which would have survived are italicised:

GOODS TRADED WITH MALABAR AND COROMANDEL (Song Dynasty, 960-1279 A.D.)
silks
porcelain
camphor
rhubarb
cloves
lump camphor
sandalwood
cardomans
gharu-wood

(chau Ju-Kua, 1225 A.D.)

GOODS TRADED BY CHINESE MERCHANTS ABROAD (14th-16th century)
gold
silver
beads
silks
porcelain
china-ware
rice
beans

silks
porcelain
lacquer ware
art-objects
copper cash
cloth
Buddhist sutras
iron pans

22
cloves
nutmeg
pepper
sandalwood
musk
putchuk
span-wood
iron bars
(Rockhill, 1915-16)
(Hagenaeur, 1935)
(Reischaeur and Fairbanks, 1961)

What is left is precisely the kind of material to be found in quantity by all the excavators at Mantai over the past century - ceramics, beads, some coins and metal, the latter usually badly corroded. What is obvious is the difficulty of drawing detailed conclusions from such a paucity of evidence. This in turn points to the value of literary evidence to amplify the picture, and the contemporary evidence from other sites known to have been in contact with Mantai where these extreme climatic conditions did not exist, for instance on the Red Sea.

Today, the site is covered with scrub jungle, apart from the area around the modern temple and its associated buildings, and the uneven terrain at the centre of the mound, the site of Hocart's and other previous excavations. During the three seasons of excavation in 1980, 1982 and 1984 a comprehensive survey was made of the whole site and the adjacent land by the Sri Lankan Survey Department, and this was amplified by further detailed plans and sections made by the excavation's own surveyor and architect in 1984. Permanent concrete bench-marks were inserted across the whole site, so that in spite of the encroaching jungle in years to come, it should be relatively easy for any future researcher to re-establish the plan and the exact location of the trenches. The first season in 1980 was largely exploratory, to excavate an area close to where Hocart had dug at the centre of the mound (Trench A) and peripheral sondages at the south of the site (Trench B) and to the north (Trench C), as well as take a series of core sample from various points to establish a general sequence of material. The second season (1982) added a new objective, the excavation of the lower levels of one of Dr. Da Silva's trenches at the centre of the mound (Trench D), to reveal the earliest levels; this produced evidence for the
initial occupation of Mantai in the mesolithic period, during the second millennium B.C., when it was a hunting-gathering community on the seashore. A variety of microlithic tools and animal and fish bones have been excavated from this earliest phase, for which a carbon\textsuperscript{14} date has been obtained of 1840-1570 B.C., A period of abandonment was succeeded by a megalithic/early historic phase, with material from the 2nd c.B.C., to the 2nd c. A.D., which can be compared with remains from the early levels at Kantarodai on the Jaffna peninsular, at Anuradhapura, and from Arikamedu on the south-east coast of India, when the whole area was in direct trading contact with the Roman empire. Also in 1982, work was begun on a main trench right across the southern moat and intended to link up with the centre of the mound (Trench E). This entailed cutting a great swathe through the jungle, some ten metres wide and over a hundred metres long.

In 1984, work was intensified and a number of new areas opened up all over the mound. The main trench was extended, and a new extension dug across the double moat (Trench F). At the centre of the mound, advantage was again taken of the removal of material by previous excavators, and two new trenches begun, one adjacent to the first season's activity (Trench G), and a second close by (Trench H). An investigation of a causeway between the west flank of the mound and the sea opened up three new areas (Trenches J,K,L); and at the northern extremity of the site, remains of a structure were excavated on the outer rampart (Trench N) and the internal structure of the mound examined at a point just opposite across the double moat (Trench M). The third season was much longer, lasting three months, and involved a far greater number of personnel and labourers. Thanks to a special grant from the Ford Foundation, it was possible to use the excavation as a training ground for Sinhalese graduate students in field archaeology, and besides their experience in the trenches, they were also taught the essentials of conservation, archaeological photography, surveying and draughtsmanship and object recording. Students were drawn from four campuses, Colombo, Peradeniya, Sri Jayewardenapura, and Jaffna, and it is noteworthy that although they came from a variety of religious and ethnic backgrounds, they worked in total harmony side by side for three months. It is all the more regrettable that civil strife marked the end of the excavation, and made any return to Mantai for scientific purpose highly unlikely in the foreseeable future. The excavated material was rescued from Mantai by the writer and Alan Graham in 1985, and a workshop established at Kotte for its study that year, thanks to the Archaeological Commissioner. Although a certain amount of classification was
undertaken at Kotte in subsequent years, this proved to be unproductive, and the bulk of the material apart from the local earthenware was then moved to England, where it has been studied in detail, prior to its return to Sri Lanka on completion of the excavation publication. That this has been possible is entirely due to the enlightened policy of the National Endowment of the Humanities in the United States, who have allowed funds earlier allocated for excavation to be expanded on the preparation of the material for publication. No less liberal has been the policy of the Archaeological Commission of Sri Lanka, to allow the material to be temporarily exported for this purpose, and to use its own counterpart funds to further this end.

What, then, have we learned from the excavations at Mantai, abruptly brought to an unexpected end in 1984? Although none of the areas excavated were fully investigated, and none have provided a complete sequence for the mound form its earliest levels to the upper most phase, a careful correlation of the evidence form a number of different areas has allowed a continuous chronological sequence to be postulated. Within the individual areas, it has also been possible to separate the successive phases from intrusive pits and other disturbances. With this evidence it has been decided to publish material in depth only from these successive, intact phases, which has greatly reduced the amount of actual material to be processed. At the same time, various categories of material, such as imported Chinese and Near Eastern ceramics, glass and beads have been catalogued in their entirety, for their actual presence at Mantai has its own significance outweighing any indigenous considerations. It will be clear from the final publication that the analysis of certain categories of material, such as the beads (Peter Francis) and bead technology (Leonard Gorelik and John Gwinnett), Far Eastern ceramics, and glass, as well as studies of the metal technology (Jill Guleff), fauna (Kenneth Thomas and P. Karunaratne), flora (M. Kajale), and pre historic evidence (Siran Deraniyagala), far transcend the parameters of Mantai alone.

In light of this, the evidence for Mantai’s crucial role in International maritime trade has been greatly amplified. After the period of contact with the Roman world and South India, an intermediate phase from the third to the eighth century A.D. appears to correspond with the Sasanian presence in Sri Lanka. Literary sources tell us that there was a Persian outpost on the island, which in all probability must have been Mantai. As we know from Byzantine sources, the Persians had the
monopoly of the silk trade from China, a monopoly which the Byzantines unsuccessfully encouraged the Ethiopians to break. The early sixth century writer Cosmas Indicopleustes described Sri Lanka thus:

"Taprobane (Sri Lanka).... there is found the hyacinth stone (quartz, sapphire?)... there are two kings on the island and they are at feud with one another. The one has the hyacinth country (the south central area near Ratnapura) and the other the rest of the country where the harbour (Mantai) is and the centre of trade... the Island being, as it is, in a central position, is much frequented with ships from all parts of India and from Persia and Ethiopia, and it likewise sends out many of its own. And from the remotest countries, I mean Tzinista (China) and other places it receives silk, aloes, cloves, sandalwood... and the island receives imports from all these marts which we have mentioned and passes them on to the remoter ports, while at the same time exporting its own produce in all directions."

Confirmation of the sasanian contact was found at Mantai with the discovery of a baked-clay bulla, typical of the sixth/seventh century A.D., with three seal impressions on it, of a two-humped Bactrian camel, a Persian inscription, and a Nestorian cross. Evidence for contact with India during this period is a sherd with a burnished impression of a scene from the Jataka stories, of a monkey riding on the back of a crocodile with some Brahmi letters above. This is the oldest known representation of this particular fable, itself translated at a later date into Persian, to become part of the Kalila wa Dimna sequence of stories so well known in Arabic literature.

Finally, in the 8th-11th century A.D. Mantai became an early medieval emporium, with a combination of material from the Islamic Near East, Tang China and the Indian mainland. It must also have been a haven for foreign merchants some of whom must have settling there permanently - early Arabic inscriptions on tombstones from the site indicate they died there, as well. The Islamic ware consists of quantities of glass, and lustre and painted pottery, with typical Abbasid white-ware bodies, themselves imitating Chinese prototypes. From China itself are numerous fragments of Tang dynasty white ware, Changsha painted pottery and green wares from south central China, and even a few sherds of sancai three-colour earthenware, previously virtually unknown outside China. There have also been uncovered several sherds from Changsha ewers, one of which has an impression of a bearded
gentleman of western Asiatic origin wearing an elaborate robe and floppy hat. Itsel
indicative of Tang taste for western esotica, similar sherds have been excavated at
Fustat, the site of old Cairo, and at Nishapur in north-eastern Iran.

Among the natural products are cowry shells of Maldavian origin which must
have been used as small currency. There were also pearls, from the famous pearl
banks of antiquity close by in the Gulf of Mannar. There are also quantities of
chank-shell debris, sawn across to form shell bangle, of which a number of bangles
fragments have also been found with carved and incised ornament. The sheer
number of half-sawn cores and other workshop debris is evidence for Mantai being
a major manufacturing site.

The industrial character of the site is further amplified by a significant remains
of glass cullet of various colours, and glass beads in different stages of manufacture.
There are also masses of iron and other slag. Over two thousand beads have been
recovered of a wide variety, with imports from as far afield as India, Afghanistan,
and the Mediterranean. The most spectacular bead is of complex design made of
various kinds of coloured glass, of which a parallel exists from Germany, this is one
of the very few early European beads ever found in Asia. Mantai was also a major
stone bead manufacturing site, and many drilled and polished specimens never
completed or fractured in manufacture have been found. Micro-analysis of the
quartz beads has revealed the use of a drill hafted with a double diamond bit, the
earliest record of such bead drilling technology in Asia.

In the latest phase of the site, parallels with material from other parts of Asia
are striking. For instance, the same Chansha material is found at Nishapur, along
with the Tang white stoneware, and lapis lazuli, jet and onyx bead pendants. As
already noted, Tang China had a taste for western exotica of all sorts, which arrived
overland through central Asia, the Tang material from Mantai represents the
reverse current, of Far Eastern material exported by sea to south Asia and the
Islamic world, including Africa. Similar material has been found at Siraf on the Gulf,
at Aqaba on the Red Sea, and inland in Sind, Mesopotamia, Iran, and Egypt. As for
excavations in China, recent finds include examples of Sasanian/Islamic turquoise
glazed ware from southern Mesopotamia, of a type found also at Mantai. Some of
the turquoise ware from China comes from dated tombs, which gives it an extra
significance as far as the chronology at Mantai is concerned.
Mantai came to an abrupt conclusion as a dynamic trading centre at the end of the tenth century A.D. with the Chola conquest of Sri Lanka. The capture of Anuradhapura and the devastation of the finely balanced irrigation system in the northern dry zone led to the swift economic decline of Mantai. For not dissimilar reasons, our own excavations came to an abrupt halt in 1984, with little prospect of them being resumed within the foreseeable future. But when that auspicious moment arrives and work at Mantai starts again, we hope that the detailed and complete record of all that has gone before, encapsulated in the Mantai publication, will serve as an aid and a blueprint for future work. As our distinguished Indian colleague, Dr. B.K. Thapar, observed when he was working with us in 1984, that when properly excavated Mantai may well establish itself as the greatest urban complex in all south Asia.
RECENT INTERPRETATIONS OF BOROBUDUR
A Critical Survey
By
J. G. de Casparis

There is no ancient monument in Southeast Asia which has given rise to as much discussion as Borobudur. This is not only due to its importance as an astounding work of art and a monumental expression of Buddhist religion and learning, but also to the mystery still surrounding its true meaning. Most problems concerning the interpretation of its statuary, its narrative reliefs and its architecture and ornamentation have been satisfactorily solved, but we have come no nearer to a generally accepted interpretation of the monument as a whole. We even do not quite know how to classify Borobudur. In Indonesia it is usually mentioned as Candi Borobudur since candi is often applied to all ancient, pre-Muslim, monuments but we have to be aware that it is not a candi in its true and limited meaning of a Saivite temple, in particular one devoted to the cult of a deified royal person. In most Western publications it is defined as a stupa, but it is again clear that it is not a stupa in its true and limited meaning. Others has defined it as a stupa-prasada, i.e. ‘externally’ a stupa, ‘internally’, a prasada or as Tantric mandala. It has even been defined as an ‘Encyclopaedia of Buddhism’ : a precursor of the admirable work started by Professor Malalasekera. Again, Borobudur has been described as a ‘mystery’ or as a ‘mysterious happening’ in stone. Finally, the present author, on the basis of a probable reference to Borobudur in an eighth century Old Javanese inscription, has emphasized its meaning as a monument glorifying the kings of the Sailendra dynasty as the foremost patrons of Buddhism. Although its precise designation may appear a problem of secondary importance, it is evident that all of the above-mentioned terms imply a particular interpretation of the meaning of Borobudur. As long as there is no consensus in the scholarly world it is preferable to avoid any parti pris by using neutral terms such as ‘monument’ or leave its designation quite open.

It should also be emphasized that in the course of its many centuries as a living monument different generations of Buddhists may have had different ideas about the meaning of Borobudur. Thus, it is well-known that the fourteenth century Nagarakertagama mentions Budur among the foundations of the Bajradara (Vajradhara) sect, and it is generally thought that this name is an abbreviation of the
monument known to us as Borobudur. The identification cannot be proved, although it is possible that some of the other sites mentioned in this list were also situated in Central Java. If it is correct, it implies that the Javanese Buddhists of the fourteenth century considered Borobudur a monument belonging to the Vajrayana sect; it does not imply that this was the case in earlier centuries. Just as in my own country (the Netherlands) many Protestant churches, such as the Dome of Utrecht, were once Roman Catholic, but were converted to Protestant churches, after the Reformation in the sixteenth century, in a similar way ‘orthodox’ Buddhist monuments may have been adopted by Vajrayanists in a period when the latter had apparently become predominant. Yet, in any attempt at determining the meaning of a monument it is preferable to concentrate on its original meaning as far as that can be ascertained.

In the present paper I may discuss some recent interpretations of Borobudur as a whole, i.e., omitting explanations of individual details, except in those cases where such details have a direct bearing on the meaning of the monument as a whole. We should always be aware of the mutual dependence between the whole and its parts: on the one hand, the view one may have of the meaning of the entire monument will often determine or influence the interpretation of its constituent parts, while, on the other hand, a new interpretation of a significant detail may entail a revision of one’s idea about the meaning of the monument as a whole. This is, of course, no more than a possibility, for a new interpretation of, e.g., a particular tree in one of the Borobudur reliefs is unlikely to compel us to modify our view on the monument itself.

As the earlier views have already received sufficient attention the present paper is confined to those expressed during the last thirty years or so, i.e. from c. 1960. Only a few older publications, in particular those necessary for a correct understanding of the more recent works, have also been included. A list of these works is given in the bibliography.

The basis of all Borobudur research is, of course, the great work by Th. van Erp and N. J. Krom, *Architectural and Archaeological Description of Borobudur* in two volumes of text (both in Dutch and in English) and three large portfolios of plates, published between 1920 and 1931. Since many details have deteriorated during the last half century (although the recent restoration completed in 1983 has
succeeded in reestablishing its original state in most cases), this great work, known as the Borobudur Monograph in the Netherlands, is still indispensable for any serious study of the monument. Krom has also summarized the main data contained in the Monograph in a shorter publication in 1930. Krom, very careful and conscientious as always, confined himself to the description and explanation of all details as far as possible, but did not propose any startling conclusions about the meaning of the monument, which he regarded above all as a stupa or simply a monument of Buddhism. His careful description led, however, to the development of many theories and much speculation about the meaning and significance of Borobudur. It is unnecessary to mention these manifold theories most of which are no longer important for the present state of our knowledge. I should, however, make an exception for several works by W. F. Stutterheim, in particular a short treatise dealing with Borobudur: Name, Form and Meaning.\(^{11}\) As many of the views expressed in these works have been elaborated by more recent scholars, a brief survey may not be out of place here. Some of Stutterheim’s ideas clearly arose as a response to Krom’s cautious interpretations.

Stutterheim’s own interpretation was based on the principle that one should not search for Buddhist texts in far-away countries like India or Tibet to interpret Borobudur, but try to find Buddhist texts in the same island of Java. Such a text had indeed been published a few years earlier, viz, the so-called Sang Hyang Kamahayanikan, freely translated as the ‘Sacred Doctrine(s) of Mahayana Buddhism’.\(^{12}\) This old Javanese treatise is actually a compilation of glosses on more than one Indian text. The oldest of these is a collection of Sanskrit slokas, each followed by an Old Javanese paraphrase. This part of the text dates back to the reign of king Sindok (c.929-947), but the other parts may be several centuries later in date. It is therefore obvious that the Sang Hyang Kamahayanikan cannot possibly have been at the basis of Buddhism as expressed at Borobudur. One cannot, however, exclude the possibility that the doctrines set out in this compilation are much older than even the oldest part of the text. But stronger arguments than those given by Stutterheim are needed before his theory can be accepted.

Quite understandably, stutterheim’s views have met with serious criticism, most convincingly by J. Fontein in his beautiful work on The Pilgrimage of Sudhana.\(^{13}\) Apart from the uncertainty whether any prototype of the Sang Hyang Kamahayanikan was already current in ancient Java at the time of the (final)
construction of Borobudur, there are some other no less serious objections against accepting Stutterheim’s interpretation as set out by Fontein. The most important of these is the absence of any clearly Tantric representations in the iconography of Borobudur. It is true that any monument (or even no monument at all) could be used for tantric ceremonies, but in that case one cannot see how Tantrism could assist us in our interpretation of Borobudur. In another publication Stutterheim proposed to see Borobudur as a huge mandala. It is indeed correct that aerial views of the monument do recall some mandalas as depicted, e.g., on Tibetan tangkas. On the other hand, it is obvious that the ancient Javanese could not see Borobudur in this manner, and on ground level, let alone from the galleries and terraces, Borobudur dose not give the impression of being a mandala. Such an interpretation is therefore unacceptable.

Despite such serious criticisms Stutterheim’s view on the basically Tantric nature of Borobudur similar views have persisted upto the present day. Such scholars as Moens, Pott, Lokesh Chandra and others have elaborated Stutterheim’s views. One of the main foundations of the interpretations of Borobudur as a tantric mandala is the identification of the monument with Budur, mentioned in the list of Buddhist centres of the Vajradhara, ‘Thunderbolt-bearling’ school in the fourteenth century Nagarakertagama Canto 77: verse 3a. As a few other apparently central Javanese centres are mentioned in this list a strong case for the identification can be made. Some uncertainty, however, remains, mainly on account of its first part: Bara. It has been explained as the modern Javanese form of Wihara, normally used to indicate a Buddhist monastery, but sometimes a Buddhist centre, comprising other buildings in addition to a monastery, but the phonetic development is not quite regular. The proposed identification of Budur in the Old Javanese text, though likely, is not entirely beyond doubt. I may add that, even if it is accepted, it indicates that Borobudur belonged to the Vajradhara sect in the fourteenth century,— which is hardly surprising if one considers that this was the predominant group within the Buddhist community at that time. The discovery of a double vajra at a few yards’ distance to the west of the monument may indicate that the monument became associated with the Vajradharas. On the other hand, there are no clear indications of Vajrayana in the reliefs or in the iconography of Borobudur, it seems probable that the vajra belongs to a later period long after the completion of the monument. Some aspects of the Tantric interpretation of Borobudur will be examined in connexion with some recent publications.
The third work which has become a basis of most later interpretations of Borobudur is the detailed analysis by Paul Mus, entitled Barabudur. Esquisse d'une Histoire du Bouddhisme fondee sur la Critique Archeologique des Textes, published first as a number of articles in the B.E.F.E.O., combined into a book in 1935. As appears from the title, it was intended as an analysis of the archaeological sources on Buddhism, culminating in Borobudur. After a critical discussion of both architectural and religious interpretations of Borobudur, Paul Mus sets out his own ideas about the symbolism of Borobudur and emphasizes its importance as a cosmic centre of the universe. In this connexion he elaborated Stutterheim's idea of the stupa-prasada: externally a stupa symbolizing Buddha-hood and Nirvana internally a temple pyramid (Prasada as a symbol of the cosmos corresponding to the Mahameru of the brahmans. In elaborating this view Mus introduced the conception of Borobudur as a closed world ('monde clos') which is somehow shut off from the phenomenal world. It is indeed true that many visitors, not excluding the present writer, have experienced this sensation when walking along the successive galleries with the main wall on the right hand side and a high balustrade on the left (both the main wall and the balustrade being decorated with narrative reliefs depicting pious Buddhist texts). This almost claustrophobic sensation is strengthened by the shape of the galleries themselves, which are divided into compartments as a consequence of the form of the plan of Borobudur with its double-protruding sides.

It is true that such discussions about symbolism (not only with reference to Borobudur) carry the risk of becoming vague and unconvincing to those who are not susceptible to these sensations, yet I feel that Mus has rightly emphasized one of the fundamental features of Borobudur, which is also a feature of Borobudur especially in its Mahayana form. It is often formulated as the lore of the twofold truth: the relative truth of the phenomenal world, as we observe it around us and the absolute truth which hidden from us by the very nature of our physical existence, but can sometimes be approached by mystical intuition. But even if one cannot accept such visions of the Highest Truth, as alluded to in many Mahayana texts, one cannot remain insensitive to the experience of the 'closed world' as one proceeds along the galleries of Borobudur.

The present author is convinced that the three different approaches to Borobudur, as set out by Krom/Van Erp, Stutterheim and Mus have become the foundations of all subsequent research on the meaning of Borobudur. The remaining
part of this paper will be concerned with some aspects of this more recent research. On account of the ever-continuing stream of publications on Borobudur and directly related topics it is necessary to make a choice. I am fully aware that any choice is bound to be personal; it is therefore inevitable that a few important contributions may have to go unmentioned.

Although most of this later, post-war research can be regarded as elaborations of the main works mentioned above, there are some new data which have come to light as a result of the great restoration, about which later, but also some fresh points of view. Among these special attention should be given to a short, but important, article by a Dutch Buddhologist which has almost passed unnoticed, viz. an article on 'Mahayana', written by D. Friedmann in a Dutch Encyclopaedia.\(^{19}\) Friedmann was the first to notice that Borobudur is actually built as ten successive terraces. The six lower terraces are basically square, the four upper ones round and open. Three of these four upper terraces are covered with a considerable number of small stupas, each with a sitting Buddha image in dharmacakramudra; the fourth constitutes the basis of the large terminal stupa. Such terraces, like the stories of a palace, are called bhumi in Sanskrit, for the latter term not only indicates the 'earth', but is often used in the sense of 'floor' or, more generally, the place where somebody or something stands. Borobudur can therefore be said to consist of ten superimposed bhumis. The first of these is already situated above ground level.

Friedmann was the first to notice the striking parallel with the ten stages of the Bodhisattva, intent on taking the road to Perfection. This parallel is further strengthened by the use in Mahayana of the same term bhumi to describe these successive stages during which the Bodhisattva gradually, i.e., during many existences, may accumulate the merit and wisdom which may ultimately lead him to Buddha-hood. Some Buddhist texts give detailed descriptions of each of these ten bhumis and the achievements required of a Bodhisattva to progress from one stage to the next. The most detailed, but dry and scholastic, descriptions of these stages are found in the Dasabhumikasutra, 'Manual for the Study of the Ten Stages', but another Buddhist sanskrit text, the Gandavyuha, 'Array of Flowers' (?), more freely rendered as 'The pilgrim's Progress of Buddhism' gives more picturesque descriptions.\(^{20}\) These are probably of more direct importance for the interpretation of Borobudur, as the Gandavyuha was well-known in ninth-century Java and served as the basis of the majority of narrative and didactic reliefs of Borobudur.
The present author remembered this interpretation when he came across the term _bhumiṣambhara_ as the name of a religious foundation in favour of which a landgrant was made by a Javanese queen in two identical old Javanese inscriptions dated A.D. 842.\(^1\) As this name fitted Borobudur as well as could be expected and topographical data pointed to a site in southern kedau province, where Borobudur is situated, the conclusion that this was the ancient name of the monument appeared beyond reasonable doubt. The inscription revealed also a new fact, viz., that the monument to be identified with Borobudur was not described as a _stupa_, nor as a _prasada_ or _mandala_, but as a _kamulan_.\(^2\) The precise meaning of this term is, however, difficult to determine. Linguistically it is a derivative of _mula_, 'root, cause, origin' etc. with affixes used especially to denote the place of something. The term _kamulan_ can therefore be translated as 'place of origin'. It regularly occurs to indicate some sort of sanctuary in which a local deity, believed to be connected with the origin of a river, a mountain etc., is worshipped. In this particular case it would seem that the term alludes to the origin of the Sailendra dynasty.

In the publication of 1950 I drew the unjustified conclusion that the ten(?) _bhumiṣ_ of Borobudur would be connected with ten generations of Sailendra rulers, which would take the beginnings of the dynasty two to three centuries back to the beginning of the seventh century. There is, however, no convincing reason why there should be such close relations between individual kings and Bodhisattva-bhumis. It seems much more likely, as I argued many years later,\(^3\) that _kamulan_ indicates the place of origin, i.e., the earliest centre of power, of the Sailendra dynasty. Another unjustified conclusion in this early publication was an attempt at tracing back the present name of Borobudur to the ancient name Bhumiṣambhara as found in the inscriptions of 842. It seems much more likely that the original name of the great monument is remembered in that of bumiṣegoro, the name of a large village in the immediate vicinity of Borobudur.\(^4\)

The work by C. Sivaramamurti, _Le Stupa du Barabudur_,\(^5\) of (1961), does not add new materials but it provides a fresh look at some aspects of material life represented in the reliefs of Borobudur. It is mainly concerned with various matters of detail represented in the reliefs, including dress and ornaments, tools and musical instruments, dancing poses, religious rites, royal emblems, etc., which are often compared with similar details in Indian reliefs or as described in texts. In connexion with all such details the author draws attention to the astounding variety in
representations of the same objects, which gives Borobudur the character of a huge encyclopaedia of art and culture. Adhering to the idea that Borobudur is basically a *stupa*, he further defines it as an *uddesika-stupa*, a monument essentially built to proclaim the glory of Mahayana Buddhism (p. 10). Sivaramamurti thus emphasized an important aspect of Borobudur and added that some part of the glory would reflect also on the glory of the Sailendra kings by whose patronage and enthusiasm this wonderful monument could be built.  

A few years later, in 1966, J. Fontein devoted a most detailed analysis of the nearly 400 relief panels on Borobudur based on the *Gandavyuha*, which he compared with similar illustrations in Chinese and Japanese art. In order ‘not to stay bogged within the confines of the galleries’ this analysis led him to some important conclusions about the meaning of the monument as a whole. Although is analysis leaves no doubt about the great importance of the *Gandavyuha* for the correct understanding of Borobudur, he rightly warns against any ‘one-text explanations’. In this connexion he calls attention to the fact that ‘the peculiar system of dhyani-buddhas cannot be adequately explained with the aid of the *Gandavyuha*.  

It is well-known, but not always sufficiently realized, that Borobudur presents the unusual system of six Dhyani-buddhas (Jinas) instead of the usual five. This sixth Buddha is represented by numerous Buddha statues in *vitarkamudra* seated in niches on the outside of the highest gallery on all four sides of the monument. These Jinas have been variously identified as another form of Vairocana, who is, however, represented in *dharmacakramudra* in all the small stupas on the round terraces, or as the Bodhisattva Samantabhadra (who, incidentally is represented as a *bodhisattva* in all the illustrations of the main wall of the fourth gallery).  

Neither explanation is convincing. This is, in fact one of the, not so few, remaining riddles waiting for a future solution.  

At about the same time R. Hikata’s article ‘On the Significance of the Barabudur Edifice’ emphasized the esoteric aspects of the monument and arrived at a Tantric explanation of Borobudur as a *mandala*, as Stutterheim had attempted nearly half a century earlier (but apparently unknown to the author). In conclusion he expressed the view that ‘the significance of the Barabudur edifice, in all probability, lies in a cubic karma-mandala representing the activity of vairocana-tathagata’s mahakaruna and mahaprajna.’ Although there is no doubt that vairocana occupied a foremost place in Buddhism as manifested in Borobudur (as
expressed in the Vairocana statues in all the stupas of the round terraces)\textsuperscript{18} , it can also be argued that none of the ‘square’ terraces testifies to any particular activity of Vairocana. In addition, the view that Borobudur is essentially a mandala is not convincing, as I have already briefly indicated in connexion with the discussion of Stutterheim’s interpretation.

Continuing the list of works concerned with the interpretation of Borobudur I should mention the richly illustrated work by Ryo and Banri Namikawa and others, entitled Barabudur (1978).\textsuperscript{28} A considerable number of fresh interpretations of reliefs, especially of the Avadana and Jataka panels, are proposed: if accepted, they may confirm and elaborate some of the views expressed by Fontein.

The great restoration of Borobudur by the government of the Republic of Indonesia with generous help of the UNESCO, as well as of many other governments and institutions, has supplied a wealth of new material giving rise to fresh interpretations and new theories. The entire monument was dismantled, every relief panel, every statue, every ornament, indeed every single stone (more than 1,600,000 in number) was numbered and cleaned before being placed back after the original hill (around which Borobudur had been built as a huge mantle of stone) had been strengthened and provided with new facilities for adequate drainage. Not counting the preliminary activities, the restoration itself took about ten years (1973-1983). All these activities have been fully accounted for in a large number of publications under the title PELITA.\textsuperscript{29}

Some of the results of this restoration, as far as the meaning of the monument is concerned, will be discussed in the last part of this paper, but at present it may be useful to discuss a few works published during the restoration period and including no fewer than three conferences, two of which exclusively concerned with Borobudur.

The first conference, held at Heidelberg in 1978,\textsuperscript{30} was concerned with the theme The Stupa. Its Religious, Historical and Cultural Significance. Many of the papers of this conference on different aspects of the stupa are of great interest for the interpretation of Borobudur; two papers are more directly concerned with Borobudur in particular. J. E. van Lohuizen-de Leeuw contributed a short paper on the Stupa in Indonesia, in which she gave special attention to the numerous
representations of stupas in Borobudur reliefs. It is curious, though not entirely unexpected, that among all the stupa forms represented in twenty eight reliefs, there is not one that shows the slightest resemblance with Borobudur itself. As is the case with palaces, ships, plants, animals, etc, all these stupas are different in detail, although their shapes can be divided into two great categories. Such representations are almost encyclopaedic in character, a point mentioned already in connexion with Sivaramamurti’s book on Borobudur. The absence of certain common stupa forms is no less striking than the presence of others. The fact that none of these stupas reminds us of Borobudur, may be an indication that Borobudur cannot be regarded as a stupa tout court.

As to the second paper concerning Borobudur, it would require a longer discussion than is possible in this paper. This is a paper by Lokesh Chandra: Borobudur: a new interpretation.31 As one may expect of this scholar, it is a very interesting and learned paper, which remains however, unconvincing. As Hikada had suggested nearly fifteen years earlier, Lokesh Chandra interprets Borobudur as a Vajradhatu-mandala, descriptions of which are found in Tibetan texts. As I have already argued earlier, although early froms of Vajrayana could have been known in Indonesia at about the time of the final phase of the building of Borobudur (probably the beginning of the nineth century) and, in addition, Budur is mentioned among the sanctuaries of the Vajradhara sect, one discerns no evidence of Vajrayana in the Borobudur reliefs, and no unambiguous evidence in its statuary, nor of any other form of Tantrism. This may not appear a strong argument since there is evidence of the worship of apparently Tantric gods and goddesses at the near contemporary temple of Mendut (no doubt closely connected with Borobudur),32 yet one would have expected unambiguous evidence of cults in which the vajra played an important part, if Borobudur represented a Vajradhatumandala. This does not exclude the possibility -- even the likelihood -- of Borobudur being adopted by Vajrayanists at a later stage when this form of Buddhism had become prevalent in Java a few centuries later. This would account for the vajra found in the immediate vicinity of Borobudur and of the well-known Nagarakertagama reference. I may add that a set of copper plates with a Buddhist-Tantric text has been discovered in the vicinity of Borobudur. All this implies that Hikada and Lokesh Chandra (as well as Moens and Pott at an earlier stage of Borobudur studies) were right, provided that they had specified that their interpretation concerned Borobudur at a later stage, i.e., from the early East-Javanese period. It should never be forgotten that
Borobudur was undoubtedly a ‘living’ monument until the advent of Islam. For that reason it would, in the course of time, be adapted to the beliefs of the predominant Buddhist sects, as long as this did not involve any major changes.

Such Tantric interpretations of Borobudur have been brought forward till recent times, e.g., by Alex Waymen,33 John Huntington,34 and Kandah Jaya35. These are all interesting and learned contributions, which have contributed to a better understanding of Borobudur and have, so to say, added a new dimension to Borobudur studies. I am, however, convinced that they do not help us understand Borobudur in the Golden Age of Buddhism in Java: the Sailendra period from c. 760 to 860 A.D.

The two other conferences were only concerned with Borobudur. The Michigan conference of 1974 showed a broad spectrum of Borobudur studies. Two of these are especially concerned with the date of the monument,36 others with its significance as a commemorative monument, as a Tantric mandala, or as a stupa: interpretations which are not necessarily mutually exclusive. The role of the Gandavyuha in the design of Borobudur (Luis O. Gomez) and literary sources for its interpretation (Lewis R. Lancaster) received due attention.37

The present author also contributed a paper,38 in which he argued that a monument of the size of Borobudur has not only a religious significance but probably carries political implications as well. It is obvious that most of such great monuments were not only built for purely religious motives, since the glory of such foundations naturally devolved upon those who supplied the means to build the monuments. Although it is likely that large sections of the population, more or less voluntarily, contributed by supplying labour and materials, the pious sailendra kings must have taken the major part in these efforts and not only out of religious favour. As in most similar cases such impressive monuments were a visible proof of the power and Buddhist piety of the rulers. By having such monuments built they acquired both pious merit and political prestige. Borobudur was no exception, as appears from an analysis of the few extant Sailendra inscriptions with reference to the monuments. In this connexion I called attention to the first verse of the Sanskrit inscription of Ratuboko in which homage is paid to the ‘Sumera of the Buddhah’s (samvuddha-sumeru) undoubtedly an allusion to Borobudur, at least to one of its early stages. As the Sumera symbolizes the centre of the universe its location within the centre of the sailendra empire underlines the presumed power of the kings of
this dynasty. In this same paper I also emphasized that the term kamulan, used in the inscription of A.D. 84239 with reference to Bhumisambhara, i.e., Borobudur, strongly suggests that Borobudur was built at the spot of the 'cradle' of the Sailendras, at least of their original centre of authority. By building Borobudur they not only showed their Buddhist piety but also glorified the memory of the founding fathers of the empire.

The third conference was an international symposium on Borobudur held in Kyoto, Japan, in 1980.40 At this time the great restoration of the monument, which had been started in 1973, was already well advanced and many new data had come to light. It is therefore understandable that many of the papers had a direct bearing on different aspects of the restoration. Yet, there was also an entire session devoted to the meaning of Borobudur and one to its historical background.

A short, but excellent, article by the late Satyawati Soeleiman examined the historical and social background of Borobudur, while Yutaka Iwamoto analyzed the relations between the Sailendra rulers and Borobudur. Neither contribution is directly concerned with the meaning of Borobudur and need not, therefore, be discussed here. On the other hand, both R. Soekmono and Daigoro Chihara concentrated their attention on the meaning of Borobudur.41

In a remarkably lucid paper—an ideal rarely attained in discussions on the meaning of Borobudur—Soekmono makes a clear distinction between the functional and the symbolical meaning of the monument. After a concise analysis of the meaning of the candi associated with the cult of defunct and deified rulers, but symbolically a representation of the Cosmic Mountain, Soekmono argued that Borobudur is neither a candi nor a temple. 'It has no interior and consequently no statue as the object of worship. It has no shaft in the center of the base, and also no roof over the edifice, so that sacred deposits--if there were any--should be expected at other places than usually found in the chandis. Consequently it cannot be defined as a temple, in spite of the traditional denomination "chandi". Soekmono equally rejects its definition as a stupa, because it is difficult to believe that the crowning stupa is the actual monument while 'the impressive mass of mounting stages, constituting practically the whole construction, while testifying to the ability of the builders, is of secondary order only.'

In another stimulating paper Daigoro Chihara tries to reconcile a number of

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different interpretations of the meaning of Borobudur. Thus, he states that 'Borobudur could be a stupa', but 'it could also be said that Borobudur is meant to embody Buddhist cosmology', while 'the hypothesis that Borobudur is a mandala cannot be unqualifiedly denied.' In addition, 'there is an undeniable element of truth in the theory that Borobudur was erected by the rulers of the Sailendra dynasty for the purpose of ancestor worship' and 'Borobudur might have been meant to be an embodiment of paramita, a concept of Mahayana Buddhism which flourished in the Central Javanese period.' As though this is not enough, chihara notes in his conclusion that 'Hinduism exerted a incontestable influence on the appearance of Borobudur.'

There is of course a good deal of truth in what Chihara wrote. Borobudur means different things to different people and many things to some. It is likely that different interpretations can sometimes be reconciled, but Chihara goes too far, especially if he also includes Hinduism. In fact, as appears from the paper, Buddhism had absorbed many elements from Hinduism long before it spread to Southeast Asia. The representation of Siva Mahadeva in reliefs of the second gallery does not imply any form of worship of Siva, rather the subordination of this great Hindu god to the Buddhist saints. For sudhana, in his quest for the Supreme Truth, consults the Hindu god as one of the numerous kalyana-mitrās before listening to the wisdom of the Great Bodhisattvas, culminating in the meetings with Samantabhadra.

As may have been expected, the recent restoration of Borobudur, completed in 1983, has yielded many new data. The most important of these is the confirmation of the view, held on more general grounds, that Borobudur attained its present shape as a result of numerous changes and additions. Some of these, such as the construction of a stone wall covering the reliefs of the foot of the monument, have long been recognized; others have come to light during the complete dismantling of Borobudur down to the original hill which constitutes its basis. These activities revealed that Borobudur was built in several stages and underwent transformations in the process. These stages have been analyzed by J. Dumarcay, who had taken an important part in the restoration. One of the most striking discoveries is the fact that the original foundation may have been a structure erected on a triple platform. Nothing of this building remains, so that it is impossible to decide whether it was Saivite or Buddhist. The present author is inclined to presume that this may have been the kamulan of the inscription of 842. Another important conclusion concerns
the round terraces, which were apparently added at a later stage. These reconstructions carry important, but still uncertain, implications for the meaning of the monument. Most of the existing theories are based on the final shape of the monument, but it now seems as though Borobudur underwent changes in form which may well reflect changes in the meaning of the monument.

In this connexion I may quote an important conclusion drawn by Dumarcay as a result of his analysis of the architecture of Borobudur. Thus he concluded: ⁴³

As has been shown, there was no unity of conception to Borobudur and the present state of the monument is an adaptation of an old idea to a new design. So visitors are usually struck by the starkness of the circular terraces which contrasts with the wealth of decoration of the quadrangular galleries. One can see the desire of the supervisors of the third stage of construction to break with what had originally been envisaged at the second stage, namely an outline as rich as the base. The symbolism of the monument, the different hypothesis of which are given in the following chapter, can thus not be presented as a sort of cosmogony where every detail was considered in advance. On the contrary, it would appear that each stage of construction was conceived with a different symbolism.

Even if one does not agree that each stage of construction implies a different symbolism (some stages may be purely technical or inspired by a desire to enlarge the monument), it is quite likely that at least some changes also involved differences in conception. If there was 'no unity of conception' it would be useless trying to arrive at a unitary conception of the monument. On the contrary, one ought to attempt to define the meaning of each successive stage of construction to arrive at a history of its meaning, reflecting, no doubt, different ideas about Mahayana Buddhism. This also implies that several interpretations may be 'correct' as long as one is aware that they are applied to particular stages of its construction. Thus, the present author called attention to the first verses of the Ratuboko inscription of A.D. 792, which he then interpreted as a 'blueprint' for Borobudur. ⁴⁴ During the conference it was, however, suggested that the reference in the inscription gave the impression of a building already in existence. In fact, homage is paid to a 'Sumeru of the Buddhas' (sambuddha-sumeru), but it is difficult to conceive of homage being paid to a conception existing merely in a planning stage.
Dumarcay’s analysis provides a more satisfactory solution by suggesting the likelihood of the existence in C.A.D. 792 of an early form of Borobudur which, however, already included a number of quadrangular terraces decorated with reliefs depicting aspects of Buddhist tradition (smriti, presumably as embodied in sacred texts such as the Lalitavistara, Gandavyuha, and Jatakas. On top of the quadrangular galleries Dumarcay supposes the presence of a round terrace, on which there once stood a structure about which little is known. The Ratuboko inscription may, however, give us an idea of a structure built on this terrace, for among the attributes of this ‘Sumeru of the Buddhas’ one finds sadvakyadhatujvalo, ‘whose brilliance is owing to its relic: the Good words.’ This compound seems to exclude the interpretation of a corporeal sariraka relic but suggests its replacement by the word of Lord Buddha, i.e., a sacred text written down on pure material, especially gold. This sacred text may have been the so-called Buddhist Credo (ye dharma hetuprabhava etc.) but I have often thought (but never ventured to express this possibility in writing) that the long text on pratityasamutpada (paticcasamuppada) engraved on a number of heavy gold plates may have been the original deposit of Borobudur. As the provenance of these plates is unknown (they emerged mysteriously in the National Museum at Jakarta after World War II) it is impossible to prove that they originate from Borobudur. As, however, the text is inscribed on eleven heavy gold plates in a type of script datable to between c. 650 and 800, there can be little doubt that they once belonged to a great Buddhist foundation of probably the eighth century A.D. Only two sites come into consideration: Candi Sewu and Borobudur. Although one cannot arrive at a definitive choice, one may express a slight preference in favour of Borobudur, mainly on account of its numerous reliefs depicting sacred texts (the sadvakyha of the inscription).

It is a curious co-incidence that Dumarcay dated the second and third stage of the construction of Borobudur, the period during which probably most of the sculptures reliefs of the galleries were completed, back to about 792 on the basis of an Old Malay inscription found at Candi Sewu. This is exactly the year of the Sanskrit inscription of Ratuboko mentioning the brilliance of Lord Buddha’s good words.

In spite of these data and conclusions emerging from or confirmed by the results of the activities connected with the great restoration of Borobudur there have still been some recent attempts at one-text interpretations of the monument. One
of the most important of these is that by J. J. Boeles, who proposed to explain Borobudur with the Saddharmapundarika as his guide. It cannot be denied that the text somehow breathes the same spirit as Borobudur, as Paul Mus had already suggested half a century ago; in addition, it would suggest a plausible explanation of the shape of the numerous small stupas on the circular terraces. I therefore believe that this famous Sanskrit text was known to the creators of Borobudur and provided one of their sources. Yet, there are a number of features that find no explanation in the ‘Lotus’ such as the system of six Jinas (Dhyanibuddhas) or, even more important, the very shape of Borobudur with its quadrangular and circular terraces, crowned with a terminal stupa. The Gandavyuha may, on the whole, stand a better chance as a ‘guide’, as Fontein suggested thirty years ago, but it also leaves important questions unanswered. Yet it has the great advantage over the Saddharmapundarika that we know for certain that the text was well-known and used by the creators of Borobudur. Finally, as the present author suggested forty years ago, the Dasabhumiṣkasūtra and the Abhisamayalamkāra would provide us with a partial explanation of the shape of the monument as a whole, but it should at once be added that some important features of Borobudur, such as the significance of the difference between the quadrangular and circular terraces and the ‘ranking’ of Bodhisattvas (Maitreya-Manjusri-Samantabhadra), find no explanation in these texts.

After all this research it seems quite unlikely that there ever existed a text which was a true and only guide to the creators of Borobudur. It seems much more likely that the monument ‘grew’, as it were, in the minds and under the hands of several generations of patrons, presumably Sailendra kings, and artisans, who each contributed to its final form, probably between about 780 and 833 A.D. They all were faithful to the main ideal of creating a monument that would embody the highest ideals of Mahayana Buddhism and, at the same time would pay tribute to the faith of the Sailendra dynasty, whose original seat of power was glorified by this magnificent edifice.

These conclusions may seem positive in some respects, but they still leave many questions unanswered. A further detailed study of the restoration reports, which together fill an entire library shelf, and of some inscriptions may enable us to arrive at further precision. It is, however, unlikely that important further progress can be made without the discovery of fresh evidence, in particular of more or less contemporary inscriptions. Although I feel that Borobudur can no longer be
considered a ‘mysterious happening in stone’, yet the splendid monument has by no means revealed all its secrets. There is still plenty of scope for fresh research.

NOTES

1. The official Indonesian spelling of the name of the monument, used in this contribution, is Borobudur. Most Western publications, however, spell the name Borobudur. The vowel of the first and second syllable is actually an open o, approximately as in English hall. The fourth consonant is actually a lingual d, transcribed as dh in modern Javanese. The normal Indonesian spelling, omitting diacritics in names, is followed here. The older Dutch transcription is Barabedoeer.


3. Cf. the definition of Pali thupa in Rhys Davids and Stede, Pali-English Dictionary, London 1925, s.v.: ‘esp. a monument erected over the ashes of an Arahat (otherwise called shatagabba = dagaba), or on spots consecrated as scenes of his acts. Such monuments are of a particular bell-shaped form. I should add that stupa is very rarely met with in old Javanese inscriptions and literature. The only epigraphic example known to me is in some of the short inscriptions of C. Placan, where the term is, however, spelt astupa and astupa. See De. Casparis, J.G. 1958: 36. 36. These curious spellings clearly show that the term was less familiar to ancient Javanese Buddhists than to Western archaeologists.


5. Sivaramamurti: 1961, passim, as already indicated in the title of the work.

6. This is the English equivalent of the Dutch subtitle of Bernet kempers, A.J. 1970. It is true that Borobudur is still a ‘mystery’ for us in more than one respect. I doubt, however, that it was meant to be a mystery, for Buddhism with its laws of causes and effects aims to explain all aspects of this world (hetum tesam Tathagato hy = avadat). Of course, there may have been mysteries also for many ancient Javanese, but these were due to their avidya and would disappear as they advanced in knowledge. I believe that Borobudur was, in fact, regarded as one of the means to achieve this aim.


8. See Nagarakertagama: 76, 1-4 and 77, 1-3 in Pigaud, Th. G. Th., Java in the Fourteenth Century, I-V. 1960-63. See also Poerbatjaraka, R. Ng. 1919, passim. The main problem is the etymology of the first half of the modern name. Poerbatjaraka’s explanation as derived from sanskrit vihara, though accepted by most subsequent scholars (e.g. by Stutterheim in the work
mentioned in note 5 above), seems doubtful since vihara survives as biara in modern Indonesian. In cases where the consonant cluster by (vy) is reduced to a single consonant we usually find y, e.g. in modern Javanese and Indonesian yasa from Sanskrit vyasa or byasa. In addition, was Borobudur ever considered a vihara?

9. Cantoes 76 and 77 actually mention two kinds of Buddhist establishments, viz. dharma kasogatan kawinayan, 'Establishments of Buddhists (living) according to the Vinaya' and kasugatan kabajradharan: 'of Buddhists of the Vajradhara school'. It is not clear what exactly is meant by vinaya in this case. Certainly not the Vinaya of the Pali Tipitaka, for Theravada was apparently unknown in ancient Java. By vinaya is probably meant Buddhist monks living according to the rules of celibacy etc., whereas the Vajradhara monks had their own rules of conduct. Buddhism as expressed in literature and art of the fourteenth century appears to have been strongly influenced by Vajradhara or other Tantric forms of worship.

10. See the bibliography under Van Erp for further details.

11. As to the name, Stutterheim mainly followed Poerovatjaraka 1919, but budur was compared to Minangkabau budua, 'just emerging', since the Javanese word budur, 'palmwine tapper' made no sense in this context. But Minangkabau is at least 1000 miles from Borobudur!


15. Vihara is a difficult term; it may simply mean an 'abode', but is usually confined to a sangharama, '(Buddhist) monastery.' In some Sanskrit texts from Java it seems to be used to denote a whole complex of buildings including a temple, a monastery
and land attached to such establishments (e.g. in the Kalasan inscription of A.D. 778)

16. See note 8 above.


18. Mus used a considerable number of Buddhist texts, but gave particular importance to the Saddharmapundarika. One may agree with Mus that this famous Sanskrit text, which emphasizes the importance of devotion and mystical vision, seems to
reflect the spirit of Borobudur, although it is curious that the 'Lotus', unlike some other Mahayana texts, is nowhere represented
nor alluded to in Borobudur. This point will again be discussed towards the end of this paper.


22. Cf. Zoetmulder's old Javanese Dictionary, who translates 'temple (shrine) of origin.'

23. The name Bumisegoro, derived from the Sanskrit words bhumi, 'earth' and sagara, 'ocean', but both used in Javanese, would mean 'Land-ocean', which makes no sense. This raises the likelihood that the name is actually a transformation of the ancient name of Borobudur, viz. Bhumisambhara, which would normally have developed into Bumisambara; the uninterpretable sambara would have been replace by the common word segara, 'ocean'. This now seems much more likely to me than the misguided attempt in De Casparis 1950: 165-9 to derive the name Borobudur form Bhumisambhara (bhumhara).

24. This is an important aspect of Borobudur, which is often overlooked. It should never be forgotten that a monument of this size would not have been erected by the Sailendra kings with the sole aim of acquiring religious merit. As also in more recent times (and all over the world!) the building of such splendid monuments was evidence of the power and the piety of the rulers who ordered (and financed) their construction (of course, with generous contributions by many of their subjects--but the extent of such contributions was direct evidence of the power of these rulers). In this manner the building of great monuments also contributed to the maintenance of their authority.


26. Again, the best discussion of the problem concerning the sixth jina is by Fontein: 166f.


28. Namikawa, Ryo, Borobudur, with many photographs from the Monograph, but also a considerable number of new photographs by Banri Namikawa, Tokyo 1978.

29. Progress Reports by the Badan Pemugaran Candi Borobudur ('Body for the Restoration of Candi Borobudur') under the title Pelita borobudur (literally: 'Five-year Planning for Borobudur', but the word Pelita also means 'lamp' in Indonesian). There are four series of reports (A, B, C and CC), each with Arabic numbers from a no. 1 (1976) to CC no.II (1982). These reports
are of basic value for the understanding of the monument.


31. Ibid.: 301-19 Incidentally, Lokesh Chandra tried to revive the old etymology proposed by Pocovatjaraka and Stutterheim to the effect that the first part of the name of Borobudur is derived from vihara (bihara) by pointing out that there once existed a synonym vahara, which would survive in the name of the city of bokhara (Uzbekistan). As this form is, however, attested only in Balkh and other areas to the west of India it is unlikely that it would have been the basis of the first part of Borobudur.


34. Huntingdon, John.

35. Kandahjaya, Hudaya, Rekonstruksi, Makna dan Misi yang diemban


37. Ibid.: 173-205.


42. Dumarcay, J., 'Elements pour une histoire architecturale de Borobudur', B.E.F.E.O. 60 (1973): 105-15; and Dumarray, J.


47. Ibid.: 48-52.

48. For C. Sewu, see Dumarcay, J.,


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THE GIANT BUDDHIST THUPAS OF SRI LANKA

By

M. M. Elkanidze

Among Buddhist thupas of Sri Lanka four thupas stand out for their extraordinary height. They are the Maricavatti thupa (the height in ancient times was nearly 61 m.\(^1\)), the Mahathupa (modern height without spire is 54.6 m.\(^2\)), the Abhayagiri thupa (modern height is nearly 116 m.\(^3\)), and the Jetavana thupa (the height in ancient times was nearly 122 m.\(^4\), modern height is nearly 70.5 m.\(^5\)).

The Maricavatti thupa and the Mahathupa were built by king Dutthagamani (161 - 137 B.C.), the Abhayagiri thupa by king Vattagamani Abhaya (103, 89 - 77 B.C.), the Jetavana thupa - by king Mahasena (274 - 301 A.D.)\(^6\).

The question arises: what was the reason for this megalomania in building Buddhist thupas? On answering it one will be able to describe the historical, cultural and social significance of these monuments in the moment of their building.

An attempt to do this was made by R. A. L. H. Gunawardana. He wrote:

"Soon after his campaigns, Dutthagamani shifted his capital to Anuradhapura. The major task undertaken by him after this event was the construction of three Buddhist shrines at his new political center. Of these, the Maha-thupa begun by him and completed by his successor was for a long time the largest stupa in the Buddhist world. Here we find Dutthagamani making a deliberate attempt to turn his political center into a place of pilgrimage for the Buddhists in the island\(^7\).

From these words one can conclude that R. A. L. H. Gunawardana's opinion is that it was an extraordinary height that made the Mahathupa a kind of totemistic center which determined the pilgrimage to it.

But the Mahathupa was not the first giant thupa built in Anuradhapura. Before it the Maricavatti thupa was erected. So if it was really the extraordinary height that attracted the worshipers to the thupa and made the place of its location a center of
pilgrimage for the people from all parts of the country, then the building of the Mahathupa in Anuradhapura was an informatically surplus action which added nothing to the cultural significance of the place, which had already been created. Besides that, following the hypothesis according to which the purpose of increase of height of the first thupa was to give some special central cultural significance to Anuradhapura one cannot explain the reason for erection of other analogous giant thupas (the Mahathupa, the Abhayagiri thupa and the Jetavana thupa) in the same place later on.

So the idea that the purpose of considerable increase in height of the thupas built in Anuradhapura in the time of Dutthagamani was to give some special central cultural significance to the city finds no theoretical background, and can be given up. The pragmatic context of their building must be reconsidered from another viewpoint.

It is evident that the first two giant thupas were built in Anuradhapura as the capital of the state. During the expansion of the Mahagama kingdom other thupas were built, but they were not so large, e.g. the thupa erected by king Kakavannatissa in the kingdom of Seru.

The first giant thupas were built in a specific period of the history of Lanka. It was the period when individuals began to feel alienated from Buddhism and necessity to extend its paradigm. In the cultural consciousness an archaic religious phenomenon was selected, and the supreme religious significance was given to it.

With the turn to the new old religious cult the Buddhist religious paradigm became formal and was subordinated to it in individuals’ behaviour, and in new religious texts created by them. This turn went along with actualisation of archaic cosmological model. One of characteristic features of this model was the contraposition of some archaic sacred cultural "center" to a "periphery" with the supreme role of the former. The "center" was perceived in an alienated manner as an object which had to be possessed.

It gave birth to the idea of the capital of the state and caused the moving of political and cultural forces from the outlying districts (Rohana) to the historical center of the civilization of the Island (North-Central Region) with its political
center Anuradhapura.

The religious perception of Anuradhapura as the capital of the state also found its expression in the activity on creating the corresponding image of the city. And it was in the context of this activity that the giant Buddhist religious complex (the Maricavatti thupa, the Mahathupa and the Lohapasada) was built there.

So strictly speaking it was not the building of the giant thupas that made Anuradhapura the capital of the state, but vice versa, the fact that Anuradhapura began to be perceived as the capital caused the building in it large religious monuments.

The actualisation of the archaic cosmological model in the Buddhist society brought the crystallization of Buddhism in a form of a tradition, with some authoritative ancient source (center) from which it allegedly was descending. It created the background for Buddhist religious conservatism. The problem of beholding the tradition became actual for the Buddhist self-consciousness. So the cult of the relics and the thupa came in the foreground.

Two other giant thupas, the Abhayagiri thupa and the Jetavana thupa were built in the viharas the communities of which seceded from the Mahavihara because of the doctrinal controversies. Extending the gnoseological paradigm reconstructed above, further one can conclude an extraordinary increase in height of each of these thupas was the formal expression of the ruler’s attitude to the teaching of the community of the respective vihara as a Buddhist tradition.
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2 Ibid.

3 Sri Lanka. 198-, p.9.

4 Sri Lanka, p.7.


LOVE UNANSWERED: SRI LANKA AND KALINGA
By
J. G. de Casparis

‘Neighbours. Everybody loves good neighbours’ is the title of a long-running Australian T.V serial, and no-one would disagree. A somewhat more controversial, but nonetheless true, statement is: ‘Every state loves good myths’. Last year France celebrated the beginning of the Third Centenary of the great Revolution of 1789 (twice the length of the Centenary that we are at present celebrating!). This revolution inaugurated a new age in Western Europe: that of liberalism, of so-called democracy, but also of colonialism and imperialism, which led to unprecedented prosperity and world-wide power of Western Europe. It seems as though one of the causes of the success of the revolution was its catching slogans as implied in the ‘Marseillaise’ and, above all, the triple ideal of Liberty, Equality and Fraternity. Every-one who is familiar with France knows that this phrase is repeated on every possible occasion - so much so that some actually believe that this ideal is really achieved or almost so. Yet, a closer look at French society reveals that it is a rather hollow phrase. As to Liberty most of us will agree that it has been achieved - although much depends on what precisely one means by this term. As far as Equality and Fraternity are concerned, much remains to be done. The triple ideal is, however, a most convenient myth.

Other nations, too, have their myths. India’s slogan satyam eva jayate and Indonesia’s Pancasila are similar national myths; they have the great advantage that they allow of different interpretations as vessels into which various liquids can be poured. One excellent Indonesian politician-historian (Muhammad Yamin) created the myth of ‘5000 Years Sang Merah-Putih’ (the red and white colours of the Indonesian flag). All Dutchmen learn at school that serious floods were prevented by a little boy sticking his finger in the hole of a dyke. A more serious national myth is that of the indelible bond between the Netherlands and the House of Orange – although ‘Stadthouder’ William V only just managed to escape to England at the end of the eighteenth century.

It is therefore no cause for surprise that also this beautiful island of Sri Lanka has its national myths. I shall not deal with modern myths (I am an historian after all) but will try to analyze an ancient myth, one of those that are closely connected
with this Island’s identity as an independent state. Most of such myths, if not all, serve to emphasize the firm bond between this Island and (Theravada) Buddhism.

Geographically, Sri Lanka is an off-shore island of the great Indo-Pakistani subcontinent, from which it is separated (one could almost say: ‘with which it is connected’) by a narrow strait (which, according to an Indian myth, had once been bridged by a dyke). Every visitor is struck by the contrast between the yellowish and dry east coast of South India (at least during most of the year) and this ever-green island dangerously hanging, as it were, on the southeastern flank of the huge subcontinent - like a mango, thus giving the island one of its many ancient names.¹

It is therefore not surprising that South Indians, especially those from Tamilnadu, looked at Sri Lanka with envy, if not with greed, and made numerous attempts at invading and occupying parts of Sri Lanka. Such attempts were already made in a very early period and have continued till recent times. Despite long periods of peace and friendly relations between Sri Lanka and Tamilnadu there is often an atmosphere of confrontation between the two, even if it is not expressed in terms of hostility. This atmosphere of confrontation is, however, much more pronounced in this island than it is on the subcontinent, where the eyes of the Tamil kings were even more clearly focused towards their continental neighbours.

This slightly ambivalent nature of the relationship between Sri Lanka and the Tamilnadu had important consequences. Firstly it led the rulers of this island to cultivate the relations with other Indian states which felt equally threatened by the kings of Tamilnadu, such as that of the Pandyas in the southern most part of the subcontinent and those of the east coast north of Tamilnadu, in particular ‘Kalinga’. Secondly it strengthened the resolution of the Sinhalese to emphasize those features which distinguished them from the Tamils. Thus, it stimulated the Sinhalese to promote the use of their language not only in speech but also in writing. It is no co-incidence that the oldest inscriptions in Indo-Aryan languages other than Sanskrit or Prakrit are those in Sinhalese. Inscriptions in (ancient) Sinhalese are available from as early as the third century B.C. and the official and literary use of the language can be followed all through the centuries till the present age. It is the only Indo-Aryan language for which this is the case. Its only rival in this respect (as in many others) is of course Tamil with an even longer continuous history. Even more important than language was religion. It is likely that the vicinity of the
predominantly Sivaite Tamils led the Sinhalese to emphasize their unwavering adherence to Buddhism. It is told in the Mahavamsa that the entire Sinhalese population was converted to Buddhism on listening to the sermons of Mahinda, but nobody doubts that the conversion of the Sinhalese was process of several centuries. There is also little doubt that the presence or vicinity of the Sivaite Tamils gave a strong impetus to the adoption by the Sinhalese of Theravada Buddhism.

The manner in which the texts, such as especially the Mahavamsa, describe the conversion to Buddhism has all the features of a pious myth, which lent Buddhism the status of the ‘chosen’ faith and the Sinhalese that of the ‘chosen’ people. In order to strengthen the bonds between the Sinhalese and Buddhism even further another myth, that of the three visits of Lord Buddha to this Island, was developed, as well as those of Prince Vijaya, landing here on the very day of Lord Buddha’s Nirvana, and the ‘kinsmen of the Buddha’. The nature of some of these myths relating to the bonds between Buddhism and the Sinhalese have been studied by Professor R.A.L.H. Gunawardana and there is no need for me to repeat his strong arguments for the function or functions that these myths fulfilled in Sinhalese society. Instead I may focus your attention on a related topic, that of the function of the most glorious of all the Buddha’s relics: the Tooth Relic. In addition to the numerous and lengthy passages relating to this relic in the Culavamsa (not in the Mahavamsa in its narrow sense) and a number of inscriptional... there are even entire texts devoted to the Tooth Relic, both in Pali and in Sinhalese.

It is well-known that the Tooth Relic, unlike nearly all the other relics, which were enshrined in dagabas, was safeguarded in a special building adjoining the royal palace. The Culavamsa describes (37-92 to 99) how the Tooth Relic (Dathadhatu) was brought from ‘the Kalinga country’ (Kalinghmha) by a certain (kaci) brahmin woman in the ninth regnal year of king Siri-Meghavanna. It was received by the king with great pomp and subsequently enshrined in the Dhammacakka building in the immediate vicinity of the royal residence (rajavatthu).

No details about the manner in which the Relic arrived in Anuradhapura are given, but the text refers us to the special Tooth Relic Chronicle (Dathadhatussa Vamsa) for further details. This vagueness regarding the origin of the most celebrated relic of the Island is somewhat surprising. It may simply mean that the author did not consider it necessary to give any details, since the special chronicle
was available to all those interested in the history of the Relic before it arrived in the Island. Yet, this attitude is clearly different from what we see in the case of e.g., the supposed chronicle of Rohana⁴, which is apparently used by the author as his source for two episodes, the second of which dealing with the descent of Prince Kitti, the later king Vijayabahu I. In those cases the original accounts were summarized by the author of the Culavamsa. Why was this not done in the case of the Tooth Relic? One would have thought that the origin of this great symbol was at least as important as that of worldly rulers. But the only information that is given is the country of origin and the fact that it was taken to this Island by a brahmin woman, whose name is not even mentioned!

It is therefore clear that a different explanation is called for.

Thus, the Culavamsa (37,97) states that the king decreed that the Relic ‘should be brought every year to the Abhayuttaravihara’, where a great ceremony in honour of the Tooth Relic would take place. We know that this monastery, better known as the Abhayagiri-vihara, was often associated with Buddhist sects, such as Vettulakas and perhaps Mahayanists, whose doctrines deviated from the norms set by the oldes vihara: the Mahavihara: the ‘established’ institution which had enjoyed the patronage of most of the kings. King Mahasena, however, the predecessor of Siri-Meghavanna, gave strong patronage to the Abhayagiri and so did, it appears Meghavanna’s successor Buddhadasa. In the eyes of many Theravadins this may have suggested that the Tooth Relic was especially associated with the Abhayagiri and its ‘unorthodox’ doctrines. The author of (this part of) the Culavamsa or his source may therefore have preferred not to give as much attention to the Tooth Relic as, for instance, the older Mahavamsa had done with reference to the Mahabodhi.⁵

This argument may not be as strong as it may seem, for the Chronicle shows that the Tooth Relic received homage from several kings in the Anuradhapura period after Meghavana. On the other hand, it is quite clear that the worship of the Tooth Relic becomes much more important during and after the Polonnaru period, especially after the re-unification of the Sangha by Parakramabahu I.

I therefore believe that the silence of the Chronicle in respect of the origin of the great Relic should be accounted for by quite a different line of argument. All students of Christian theology know that the origin or even authenticity of the relics
of Christ has often been a matter of doubt and discussion. The controversies around the Holy Shroud of Turin, the cloth in which Jesus Christ would have been buried after the Crucifixion, have led to all kinds of tests, even with the most sophisticated methods, but without real consensus of the faithful, simply because it is a matter of faith, not of historical proof. The same is probably the case with the relics of Lord Buddha, and many monks and laymen may not have been convinced of the genuineness of the Tooth Relic, the more so because the traditions, as laid down in the Tooth Relic Chronicle did not inspire much confidence. A few words may therefore be devoted to these traditions.

According to the Dathavamsa, after the Buddha’s Nirvana and the cremation of his corporeal remains, the Tooth Relic would have been taken from the funeral pyre by a certain Khema, who took it to Kalinga where he handed it to king Brahmadatta of that country. Three generations later, during the reign of a certain king Guhasiva (as Brahmadatta unknown from other sources)⁶, there arose serious conflicts around the Tooth Relic in Kalinga, in which especially the Jainas would have been involved. As the relic was in great danger king Guhasiva realized that Sri Lanka was the safest place for the Relic. Since Mahasena was a friend of Guhasiva, the latter sent his daughter and son-in-law with the Relic to Sri Lanka. There the Relic finally arrived after Mahasena’s death in the ninth regnal year of Kitti-Siri-Megha (i.e. Siri-Meghavanna of the Mahavamsa).

It is obvious that the chronology of the history of the Tooth Relic, as set out in the Chronicle, is quite impossible. The three or four generations after the Nirvana would take us to the fifth or fourth century B.C. not to the fourth century A.D., which is about eight centuries later. On the other hand, even if communications between Kusinagara (Kasia in northeastern U.P.) and Kalinga were difficult, the journey would not have taken nine years. The names of Khema and Brahmadatta are among the most common ones in Pali texts: about twenty five Brahmadattas are mentioned in Malalasekera’s Dictionary. The author of (this part of) the Culavamsa, who was an erudite scholar, was no doubt aware of the unlikely course of events as told in the Tooth Relic Chronicle, at least as far as the history of the Relic before its arrival in Sri Lanka is concerned. That is no doubt why he just refers the reader to the Dathavamsa without summarizing the story as told in that Chronicle.⁷

About Kalinga itself all the older chronicles are quite vague. The only town
which is mentioned is Dantapura. As many Sanskrit inscriptions of different kings of Kalinga were issued from Dantapura this is a clearly historical name. Its precise site is, however, still controversial\(^8\), although there is little doubt that it was situated on the Vamsadhara river, presumably in the area of the famous Mukhalingam.\(^9\)

A similar vagueness about Kalinga is noticeable in earlier references to the country. Thus, the first two kings of the Island are said to originate from Kalinga. As far as the *Mahavamsa* account of Vijaya is concerned, its ‘author has evidently attempted a consistent synthesis of more than one tradition’ (Basham 1952: 165): one tradition, which includes the name of the well-known ancient port at Supparaka (Sopara) and the part played by a lion, points to western India; another one, which includes the country of Vanga and Kalinga, to the east coast of the subcontinent. In this tradition, or rather its version used in the *Mahavamsa*, Kalinga apparently play a minor part as the country of origin of Vijaya’s great-grandmother. The word ‘apparently’ is exphazized, not only on account of the importance of matrilineal relations in the Sinhalese royal dynasties, but especially because later tradition attaches particular importance to Vijaya’s Kalinga origin. Thus, Nissankamalla, hailing from ‘Sihapura in the country of Kalinga in noble Dambadiya’, in this connexion mentions ‘king Vijaya, descended from the family of Kalinga Cakravartins, who had the power of travelling through the air’ (Galpota Slab Inscription, see Wickramesinghe 1928).\(^10\)

For Nissankamalla, who did not belong to one of the ruling families in the Island, it was essential to ‘prove’ his legitimacy as a king by mentioning that he had the same origin as the first king of Sri Lanka. As he himself originated from Kalinga, he naturally emphasized the ‘Kalinga’ origin of Vijaya (whose ancestors were even promoted to Cakravartins!).

Not only the first, but also the second king of Sri Lanka is said to have originated from Kalinga. The *Mahavamsa* is, however, very vague again and mentions only the city of Sihapura, where members of Vijaya’s family were ruling. The new king, Panduvasundevya would have been a nephew of Vijaya and was therefore again connected with Kalinga.

As to the reason why the origin of the two first kings was associated with Kalinga Basham (1952 : 166) suggested that this tradition arose because the
Tooth Relic had been brought from there not long before the Mahavamsa was written. There is, however, a serious objection against this theory, for the Mahavamsa in its narrow sense (i.e. till verse 50 of Canto XXXVII) does not mention the Tooth Relic Chronicle, nor even the Tooth Relic itself. These references are first found in (the first part of) Culavamsa, which was probably completed by the end of the reign of Parakramabahu I at the end of the twelfth century. The manner in which the arrival of the Tooth Relic is mentioned in the Culavamsa is also quite striking. Just after the mention of some foundations in the Abhayagiri-vihara we suddenly read (XXXVII - 92) that 'in the ninth year of this (King) a Brahman woman brought hither (to Anuradhapura) from the Kalinga country the Tooth Relic of the great Sage (Buddha)', immediately followed by a reference to the Dathadhatissa Vamsa, the Tooth Relic Chronicle. From the latter it appears that the previous ruler (Mahasena) had already sent envoys to Kalinga with the request that the Relic should be brought to the Island. The Mahavamsa is, however, completely silent about this embassy sent by Mahasena. There may therefore be some doubt about the historical correctness of the version as related in these texts.

This analysis may show the tenuity of the traditions concerning the relations between Sri Lanka and Kalinga before the fifth century A.D. This is hardly surprising if conditions in this part of the subcontinent are taken into consideration. Kalinga comes briefly into an historical focus after Asoka's conquests in the middle of the third century B.C., but after the two Separate Rock Edicts at Dhauli (near Bhubanesvar) and Jaugada (Ganjam district) we have to wait two centuries more to the time of king Kharavela (probably in the middle of the first century B.C.), who boasts to have conquered vast parts of the subcontinent. If these conquests are to some extent based on historical facts, they carried no consequences as far as one can see. In addition, neither in the long inscription in the Elephant Cave (Hathigumpha) nor in any of the inscriptions in the adjoining caves can any trace of Buddhism be discerned.

After Kharavela's time we have to wait several centuries again till we find other inscriptions in what is at present the State of Orissa and the northern most part of Andhra Pradesh. It is only from the end of the fifth century that we get a considerable number of inscriptions, especially of kings of the Early Ganga dynasty. That is, however, more than a century after the time of the arrival of the Tooth Relic!
There is, however, one important exception, viz., the site of Salihundam near Mukhalingam in Andhra Pradesh, where important Buddhist antiquities were discovered. Most of the statuary discovered there points to a late period as it is Tantric in character (e.g. a well-known Marici statue), but the presence of a few ancient brahmi inscriptions proves that it is an old site. One short inscription actually reads dhamarano Asokasirino, 'of king Asoka'. This may be a reference to the great Maurya emperor, although his name is never given in this from in his inscription; also the script appears somewhat later than the Asokan brahmi. One of the stupas at Salihundam shows the typical cakra basis of the Andhra stupas. Nothing has, however, been discovered there that can be associated with the site where the Tooth Relic was kept until it was brought to this Island. Archaeologically Salihundam seems to be the northernmost extension of the great Buddhist sites of the delta of the Krishna river.

The site of the old capital city of Dantapura has not yet been identified with certainty, but it is generally thought that it corresponds either to modern Dantavaktrakota near Srikakulam (Chicacole) or to Dantakura (=Ptolemy's Paloura?). A considerable number of inscriptions were issued from Dantapura, but none of these gives any reference to Buddhism. It therefore seems doubtful whether the name Dantapura is indeed derived from the Danta(dhatu); it may just be derived from danta, 'ivory', for Kalinga was famous for its elephants. In that case the very name of Dantapura may have given rise to the tradition that the famous relic came to Sri Lanka via this important centre.

I already mentioned the striking silence of the Mahavamsa with reference to Mahasena's delegation to Kalinga. Also in the centuries that follow there are only few references to Kalinga in the Culavamsa. There is a possible mention of Kalinga in XLII-44 in connexion with the arrival in Sri Lanka of a prince 'whose mind was disturbed when he saw the death of living beings in war.' It should, however, be emphasized that Kalinga in this verse is found in none of the extant manuscripts (which present a five-syllable hiatus at this point), but has been conjectured by Geiger. Geiger's translation again mentions the 'Kalinga prince's minister in XLII-46, but the text reads only 'his minister' (tassamacco). Although the reconstitution Kalingamha mahipati may seem satisfactory also as far as the metre is concerned, it should, however, not be forgotten that Kalinga is not actually mentioned in the text; there are other possibilities.
The next reference to Kalinga occurs very much later, in 956. The *Culavamsa* states that the *Yuvaraja Mahinda* (i.e. Mahinda IV) ‘founded the royal house of the Sinhalas’ after fetching ‘a princess of the line of the ruler of Kalinga’. He did so, ‘although there was also in Lanka a race of nobles’ (*Cv.* LIV, 9-10). If this is indeed the meaning of the verse it would imply some criticism, as though the king preferred a queen from Kalinga to one of the Sinhala maidens. This is surprising since the Chronicle has nothing but praise for Mahinda IV. The precise meaning of these two verses is, however, by no means clear, except for the reference to Kalinga.

What strikes us most in all these references to Kalinga is their vagueness. In both of the last mentioned passages one is struck by the absence of names. The Chronicle is silent about the name of the prince from Kalinga (?) who, as Asoka a thousand years earlier, was so shocked by the killing of living beings in war that he joined the Buddhist Order. No information is given about the place from where in Kalinga (?) he would have come or to what royal family he belonged (*Cv.*XLII-44). The Chronicle is just as vague about the consort of Mahinda IV. If she was indeed a princess from Kalinga, why is there no mention of her own name, of that of the dynasty to which she belonged or the capital where she came from? In other cases such details are rarely omitted, if only to show that the queen belonged to a family of equal rank. Actually, this vagueness applies to all references to Kalinga in the chronicle before c.A.D. 1000. On the one hand, one may argue that the author of this part of the Chronicle would have been indifferent about such details as names or geographical details other than the name kalinga itself; on the other hand, one may wonder whether this vagueness is not intentional: precise indications can be verified and may be found incorrect, whereas with vague statements one can hardly go wrong (current weather forecasts are good examples). Perhaps ‘Kalinga’ did not mean much more than ‘overseas’. I am inclined to accept the second alternative, because the *Culavamsa* is generally quite precise in such matters.

After the turn of the millennium the indications are more detailed. Thus, in connexion with Vijayabahu I the author devotes eleven verses (LIX-23 to 33) to his two queens and their offspring. The first was a daughter of an earlier king (Jagatipala, ‘a Sovereign’s son who had come from the town of Ayojja’,*Cv.* LVI -13). Of the second, Tilokasundari by name, it is stated that she descended from the lineage of the kings of the land of Kalinga, that he had her fetched from the kingdom of Kalinga and consecrated as a *mahesi* (*Cv.* LIX -30). A few verses later (LIX-46)
we read about three princess, 'kinsmen of the Mahesi (Tilokasundari), who had come from Sihapura', one of the capitals in the period preceding the rise of the Eastern Gangas. It was probably situated in Srikakulam District. Although these references are not as precise as one may have wished, they mention at least a few details, such as the name of the princess and the town in Kalinga from where she 'was fetched' (anapetva).

During the turbulent years at the end of the twelfth century following the death of Parakramabahu I we again get a number of references to Kalinga, especially in the inscriptions of Nissankamalla. These references are not found in the Culavamsa, which gives only a very brief account of the reign of Nissankamalla, but in the numerous inscriptions which this ruler has left.

Thus, in one of his inscriptions he traces his ancestry back to Vijaya and even to the Mahasammata of Buddhist tradition19, but sometimes he also gives details about his more direct antecedents. Thus, in the long Galpota Slab Inscription20 he mentions the name of his father king Sri Jayagopa and his mother Paravati, reigning in the city of Sihapura in Kalinga. Of his two consorts the second is said to belong to the Gangavamsa, the well-known dynasty reigning in Kalinga since the end of the fifth century A.D. Even his capital Polonnaru is called a 'Kalinga city' (B-7: Pulastipura namati Kalingaka-purayehi)! Near the end of the inscription we find the famous instruction to the effect that 'the Island of Lanka .... belongs to the Kalinga dynasty' since the time of prince Vijaya.

There can be no doubt that Nissankamalla must have had very strong reasons to emphasize the strength of the relations between Sri Lanka and Kalinga through the centuries. His position must have been weak despite his remarkable patronage of the Buddhist Sangha. As to his own origin from Kalinga there can hardly be any doubt, although his original status as a son of the king of that country is no doubt exaggerated. As to the site of Sihapura (Simhaputa) it is usually identified 'with the present village of Singupuram, situated between Srikakulam and Narasannapeta in the Srikakulam District' of Andhra Pradesh (Rajaguru 1958 : 63 on the basis of Hultsch in Ep. Ind, IV, 1896-7 : 143, who proposed this identification merely as a possibility). This Simhapura seems, however, to have lost its importance as a capital city soon after the middle of the sixth century (Rajaguru 1958 : 72 f.) after the fall of the Mathara dynasty of Kalinga. In the twelfth century it is briefly mentioned in
two inscriptions at Mukhalingam dated 1175 and 1179 as the residence of two officials of Kalinga. ‘Thus, it is found that Simhapura retained its importance in Kalinga upto 1200 A.D., although it was no longer a capital city.’ (Rajaguru 1958: 73) Nissankamalla no doubt belonged to a family of petty rajas ‘ruling’ in a small part of Kalinga under the authority of the Gangas, with whom one of his two mahasis was apparently related.21

In the confused period following the death of Nissankamalla another prince was fetched from Kalinga, actually the latter’s step-brother, called Sahasamalla, whose principal fame rests on the fact that he ‘was consecrated king on August, 23,1200, the first definitely fixed date in Ceylon history’ (Nicholas and Paranavitana 1961:242). The confused period ended with the relatively long reign of the ill-famed Magha, ‘an avenger who came from Kalinga to restore the Kalinga line which had been supplanted by queen Lilavati and king Parakkamapandu for nearly four years’ (Nicholas and Paranavitana 1961:246). The reign of Magha marks the sad end of the once glorious Polonnaru period. It also seems to mark the end of close dynastic relations between Sri Lanka and Kalinga.

From the preceding account it can be seen that the long relationship between Sri Lanka and Kalinga can roughly be divided into two periods. In the first of these, roughly corresponding to the Anuradhapura period, Kalinga is often mentioned in the Chronicle and in inscriptions, but the most striking feature of these references is their vagueness. Precise details are lacking in the accounts concerning the origin of Vijaya and Pandu Vasudeva, which appear to be largely mythical. It has been convincingly pointed out that the accounts are based on stories such as those contained in the Jatakas. It seems rather arbitrary to accept some features of these stories while rejecting others. There is therefore no reason to attach any historical significance to the references to Kalinga in these stories. They may be based on some oral traditions which were, however, selected and adapted for special reasons. This may well be true also for the accounts concerning the history of the Tooth Relic before its arrival in this Island. None of the details in the account of the Dathavamsa admit of verification. Basham thought that the earliest references to Kalinga were based on the fact that the Tooth Relic arrived in the Island from or through Kalinga (Basham 1952:166), but doubt has already been expressed as to the veracity of this tradition. Thus, as we have seen, the Mahavamsa omits any reference to the delegation sent to Kalinga by Mahasena, and its continuation, the Culavamsa.
confines the account of its origin to the statement that the Relic was taken to Sri Lanka from an unnamed place in Kalinga by an unnamed Brahmin lady.

A similar vagueness prevails in the few later references to Kalinga in the Anuradhapura period. There, too, one notices the absence of any precise indication of names of capitals or of kings in Kalinga. Even the name of the mysterious prince from Kalinga, who became a monk in Sri Lanka is not mentioned.

In the Polonnaru period, however, much more precise details are given, e.g., with reference to the second consort of Vijayabahu and especially to Nissankamalla's family. Yet, even then none of the details given can be checked with the help of the numerous inscriptions of ancient Kalinga, viz, the Ganjam district of Orissa and the Srikakulam district of Andhra Pradesh. These sources are now easily accessible thanks to the volumes of the *Inscriptions of Orissa* 21, which include those of Srikakulam district, and have excellent indexes. Contrary to what one may have thought, relations with Sri Lanka do not seem to have been considered very important - at least not as important as these relations were for the Sinhalese. It is striking that hitherto none of the names of this Island (Lanka, Sihala, Tamraparna, Amradvipa etc.) is ever mentioned in Kalingan sources despite the large numbers of inscriptions available, such as those of the Eastern Gangas whose capitals were situated in the very region to which the Sri Lankan sources refer or allude. We therefore have to conclude that the relations between the two countries were, at least predominantly, unilateral.

When we speak of relations in this context we must make an important distinction. There certainly were numerous relations about which the sources do not inform us, such as ordinary commercial relations. In addition, all historical accounts, including those included in inscriptions, are necessarily selective. Only those relations that are relevant in the context of the main purpose of the texts are selected. The inscriptions, usually copper-plate grants of land to Brahmans or to institutions, give only those details that have a direct bearing on the primary purpose of the grant. These include e.g. the date, the names and titles of the king as well as of the grantee (s): the kind of details which authenticate the grant. Yet, in connexion with the royal order one would, at least occasionally, have expected some reference to other countries with which the kings entertained close relations. There are, for instance, quite a few references to Sri Lanka in the Chola inscriptions. The absence
of any reference to this Island in the Ganga and other inscriptions of Orissa is therefore the more surprising.

This silence can partly be explained by the relatively weak position of Buddhism in Kalinga. A passage in Hsuan-chwang's account about the paucity of Buddhist monasteries in Kalinga in the middle of the seventh century (Watters 1905:II 198) is often quoted; the absence of references to Buddhism in the numerous inscriptions of the area is even more significant. It is true that an important exception should be made for the three great Buddhist foundations north of the Mahanadi river, viz. Ratnagiri, Udayagiri and Lalitagiri, but these belonged to advanced forms of Mahayana - not the kind of institutions with which the Sinhalese would have fostered close relations. In addition, these Buddhist foundations were situated far from Kalinga in its narrow sense, but in Utkala, where also Hsuan-Chang's Puspagiri should be located.

It is, of course, always dangerous to base conclusions on the absence of data (the notorious argumentum e silentio), for such conclusions could be upset by the discovery of new inscriptions. Yet, we have to work with the evidence at our disposal. The historian has always to be aware that he never has the complete evidence, since something is bound to get lost or hidden in the course of the years, let alone centuries. But even if, in future, we find a reference to relations with Sri Lanka in an inscription this would hardly change our conclusion about the one-sided nature of the relations between Sri Lanka and Kalinga.

The present author is convinced that the complete absence in the Kalingan sources of references to this Island was the basis of the famous attempt by Paranavitana at identifying the Kalinga of the Sri Lankan sources with (a country in) Southeast Asia (usually called 'Malaysia' in his publications). This theory, based on distorted interpretations of passages in texts and inscriptions and subsequently shored up by the reading of interlinear Sanskrit inscriptions which no one else has distinguished, has been convincingly rejected by K.A. Nilakanta Sastrl, A.L.R.H.Gunavardana, K. Indrapala, W.M. Sirisena and others; there is therefore no reason for me to 'flog a dead horse'. On the other hand, this rejection compels us to face the question why the inscriptions of Orissa and northernmost Andhra Pradesh are silent about relations with Sri Lanka. In principle, it seems that the kings of Kalinga, in particular the Eastern Gangas, who controlled Kalinga in its
narrow sense after the end of the fifth century A.D., took less interest in Sri Lanka than the latter in Kalinga, and this for mainly political considerations. If I may come back to the beginning of this paper, I emphasized the position of this island with regard to the vast Indo-Pakistani subcontinent and its continuous threat of invasions from the opposite coast. Owing to its size Sri Lanka did not have the resources to resist for any length of time, at least when it faced a mighty and expansionist state such as that of the Colas from the tenth century A.D. Even before that time there were numerous invasions from the subcontinent, but these were mainly in the nature of raids. From the tenth century, however, they became much more serious and led, as we all know, to the Cola occupation during the major part of the eleventh century, when the island was annexed as a mandala of the South Indian empire.

As the Island did not have the physical force, in particular the manpower, to resist the Colas, they concentrated on the spiritual force, in particular the spirit of Buddhism and the civilization inspired by Buddhism. Even when, as happened after the liberation of the Island in 1070, there were not sufficient theras left to conduct the ceremony of admission to the Order, king Vijayabahu realized the necessity of giving new life to the Sangha and applied for the help of king Aniruddha of Pagan. The Chronicle also stresses the presence in the Island of what was gradually becoming the main concrete symbol of the Buddhist identity of Sri Lanka: the Tooth Relic (and other relics) which pious monks had hidden in the jungles of Ruhuna.

At the same time Vijayabahu did everything possible to end the relative isolation of Sri Lanka which had led to a certain degree of dependence on the subcontinent. He did this especially by fostering his relations with other kingdoms which, as Sri Lanka, were facing the danger of Cola expansion, in particular the Pandya kingdom and that of Kalinga. The classical doctrine of Kautilya's Arthasastra is the precise opposite of the first sentence of this paper: a neighbour state is a natural enemy. As often in such cases, matrimonial links with other kingdoms facing the threat of Cola expansion were considered the best means to promote friendship with such kingdoms in the hope of being able to form a common front against the threat of invasion. In accordance with these tactics Vijayabahu's sister Mittha was married to a Pandya prince, while Vijayabahu himself married the Kalingan princess Tilokasundari. 'Vijayabahu's foreign policy was thus directed to strengthening existing ties and creating new bonds of friendship with the enemies, actual and potential, of the Colas' (Nicholas and Paranavitana 1961: 194).
In this light we should see the numerous references to relations with especially Kalinga during the Polonnaru period. Thoes with the Pandyas were of a more complicated nature, as the Pandya kingdom had become a feudatory of the Colas until the latter half of the twelfth century. Kalinga, however, being the northern neighbour of the Colas and their feudatories, the Eastern Calukyas, faced further Cola expansion and had to take measures to be able to resist.

If we consider the relations between Sri Lanka and Kalinga in this light we can understand the difference in attitude of the Sri Lankan sources before and after the turn of the millennium. We have already seen that the older references to these relations are of such a vague nature that one any doubt of their authenticity. Such doubt is, however, out of place for these relations after about A.D.1000, when we get names and further details. As the Sinhalese attached great importance to their relationship with Kalinga during the Polonnaru period, they naturally tried to trace the roots of this relationship back to a much remoter past. There may well have been popular traditions about Vijaya and about the Tooth Relic but, apart from a brief mention of Kalinga as the country of origin of Vijaya's grandmother, the consort of a lion, the latter country is not even mentioned in the original Mahavamsa. And, although Mahasena is said to have sent a delegation to Kalinga in order to take the Tooth Relic to the Island, the Mahavamsa seems to ignore such an important event, at least does not mention a word about it in the account of Mahasena's reign. The arrival of the Relic from Kalinga (but without any further details) is mentioned in the first continuation of the Great Chronicle completed, probably, after the reign of Parakramabahu I.

When considering these facts one gets the clear impression that the emphasis on relations with Kalinga, both dynastic and religious, belongs to the Polonnaru period when it was considered politically expedient to promote the relations with a country which occupied a similar position vis-a-vis the Colas as they did themselves. As in such cases it is always important to point out that the relation was not solely inspired by a recent development but was rooted in the past, the myth of the ever-leasting link between Sri Lanka and Kalinga served a useful purpose, especially during the Polonnaru period when the memory of the Cola occupation was still fresh. Yet, the Sinhalese never seem to have taken any real interest in Kalinga; if we had to rely on Sri Lankan sources on the history and culture of Kalinga, we would know almost nothing on this important and culturally rich part of the subcontinent, which
contributed very much to the development of Indian art and architecture. I had almost written ‘to Hindu art and architecture’, for Buddhist culture is not strongly represented in the still extant monuments, iconography, and epigraphy - except, of course, for the imposing triad of Ratnagiri, Udayagiri and Lalitagiri, which curiously seem to have been well beyond the Kalinga mentioned time and again in the historical sources of this Island.

One cannot, of course, exclude the possibility that truly great Buddhist monuments will be discovered in what is now southern Orissa and northern Andhra Pradesh (Visakhapatnam district), but the chance of this happening is remote. As long as this is not the case, it seems proper to regard the close relationship between Sri Lanka and Kalinga as a myth used as a ‘political charter’ in ancient and medieval Sri Lanka - on the same level as that of the ‘Kinsmen of the Buddha’, as has been convincingly argued by R.A.L.H. Gunawardana.
NOTES

1. Viz. Amaradipa. It has been stated that 'owing to the geographical and economic importance of Sri Lanka as an extension to the south of the Asian Mainland, the island has been identified by more than 70 names during its history.' (Roland Silva, Religious Architecture in Early and Medieval Sri Lanka, Proposition No.4).


4. Cv. XLV: 38-82 and LVII: 4-76.


7. Thus, the Bodhi Tree is discussed in an entire chapter (Mv. XVIII: 1-68), while the preceding chapter (XVI) is entirely devoted to the Alms-Bowl and the right Collar-bone, and the miracles performed by these relics.


11. See note 8 above. There are a few other interesting sites in the neighbourhood, especially Sankaram and Ramatirtham, which have still been insufficiently studied. Sankaram, in Particular, has yielded materials dating from the Satavahana period.
and also much later (upto the ninth century). From the materials at present available (see Debala Mitra 1971: 218-22 and Plates 135 f.) there is nothing suggesting a relation with Dantapura.

12. Ramachandran 1949: 37 and fig. 3 (A).

13. The script of the inscription seems contemporary with that of the inscribed pot, which mentions a Kattaharama (Ramachandran: 135: early part of the second century A.D.).


15. See e.g. Rajaguru 11: Nos. 2, 12, 39, 41. Dantapura is especially associated with the Eastern Gangas, whose kings were Saivites till the 12th century, when Vaisnavism became the established religion of the dynasty.

16. There are actually five syllables missing in all the manuscripts. Although Geiger's reconstitution is in keeping with the metre and yields good sense, it remains conjectural. The king could have come from Kamboja or from elsewhere.

17. The 'double' use of vamsa of pada g seems ungrammatical.

18. Thus, Simhapura was one of the capitals of the Matharas (5th-6th century); see Rajaguru 1958, Vol. 1, Part ii: 59-62. Its precise site is unknown, but all the inscriptions issued from Simhapura seem to belong to the Vamsadhara valley, in particular the Srikakulam area. After the sixth century, however, it was no longer a royal residence although the Gangas kept it as a residence of tributary chiefs (Rajaguru 1960: 228).

19. This is the same Galpota Slab-Inscription mentioned in note 10 above.


22. There is still no detailed study about these great Buddhist monuments available. We have to rely on the photographs and descriptions in the official reports and in works such as Debala Mitra's Buddhist Monuments. It is, however, clear that none of the monuments is older than about the 8th century A.D. and most are considerably later.

23. The name of 'Kalinga' can be used in its precise meaning of approximately the present districts of Srikakulam and Ganjam.
or in a wider meaning, including also the present state of Oriasa up to the Mahanadi delta. It is well-known that Kalinga in the Asokan inscriptions extended northwards to at least the area of modern Bhubaneswar (Dhauli). To avoid misunderstanding I am using Kalinga in its narrow meaning.

24. This excellent idea is, however, followed by a misguided reference to the empire of Srivijaya in Sumatra and the Malay peninsula, based on Paranavitana’s idea of the location of Kalinga as mentioned in (some of) the historical sources of the history of Sri Lanka. Curiously, the Index of the Concise History of Ceylon first gives Kalinga (India) with four, followed by Kalinga (Malaysia) with many more references.
SOME IDEOLOGICAL ASPECTS OF THE EARLY
BRAHMI INSCRIPTIONS OF LANKA

By
M. M. Elkanidze

"The early Brahmi rock inscriptions" is an important historical source on the period of the beginning of spread of Buddhism in Lanka. Some groups of them have been marked out for the present study.

1. Inscriptions in which only the name of a person is mentioned.

2. Inscriptions in which the right of ownership of a person on a cave is claimed.

3. Inscriptions telling about donation of a cave belonging to a person to the Buddhist sangha.

The aim of the study is to describe the pragmatic nature of each group of the inscriptions. The inscriptions are considered from two aspects: socio-economic and religious.

The inscriptions appeared in the historical period of the Lankan society when disproportion between "ecology" and 'demography' caused social tension, and alienation between individual and society. The problem of preserving wealth, property and social status of an individual came in the foreground.

Rock cave served as a house for the people of the Island from he earliest times. In the situation of relative overpopulation in the society the problem of place for living became actualised. The house turned from the category of a part of individual's body to the category of an object of property which could be alienated. The writing of individual's name on a rock-cave could be a primitive manner of marking his property right on it. A more complete formula telling that the cave belonged to a certain person developed later.

The alienation from the society brought individual to the extreme forms of
religious behaviour. In the situation of relative lack of wealth for traditional sacrification the category of sacrifice was shifted from objects of property to the objects which traditionally could not be alienated because were considered as parts of individual's body. Sacrification turned into self sacrification. The traditional religious paradigm became formal. With it, self-sacrification began to be made through the texts which were especially created for this purpose. The mere objectification of sacrificial objects in the texts acquired religious meaning. Some texts had purely nominative character. The mountain, the rock had religious meaning in the cosmological model of the early indo-european population of the Island. In this context the writing of individual's name on a rock could be a form of his self-objectification as a sacrifice to the traditional religious cult of the mountain, an act of worshipping it.

The donation of a cave to the Buddhist sangha was also an act of man's self-sacrifice, because the house was not considered in buddhism as an object of property: e.g., in the "Samyuktaratanapitaka sutra" the house is mentioned as one of sacrifices which a person with no wealth can make.

Donations of rock-caves to the Buddhist sangha indicated the formalisation of traditional religious cult, its individualisation (the votive inscriptions belong to members of different social strata), the appearance of a new religious cult (Buddhism) in the society, and subordination of the old religious cult to the new one.
REFERENCES


THE CRAFTSMAN AS ARTIST AND INNOVATOR IN EARLY MEDIEVAL SRI LANKA

Two Lamps with Hydrostatically Controlled Oil Reservoirs

By

R.A.L.H. Gunawardana

"The important part which craftsmen, more particularly Oriental craftsmen, have played in world’s history... is not generally realized by bookmen... In medieval times the craftsman’s intellectual influence, being creative and not merely assimilative, was at least as great as that of the priest and the bookman."

E.B. Havell in Indian Sculpture and Painting

It is not often that historians of Sri Lanka find material from reliable chronological contexts for the study of technology in precolonial times, and, in this respect, the archaeological excavations carried out between the years 1951 and 1955 at the Kotavehera, the stupa with an unfinished appearance at Dadigama are most noteworthy. These excavations brought to light several objects and structures which are remarkable for the light they shed on crafts and technology in early medieval Sri Lanka. In the early 1930s H.W. Codrington had suggested with characteristic insight that this stupa should be identified with the Sutigharacetiya which was built by Parakramabahu I (A.D. 1153-1186) to mark the site of the "maternity home" at Punkhagama where he had been born. In his "Archaeological Summaries" published together with Codrington’s note, A.M. Hocart pointed out that bricks from this stupa were very similar to those from the Lankatilaka image-house at Polonnaruva erected by Parakramabahu I. Valivitiye Sorata and S. Paranavitana have demonstrated that the term Punkhagama is a translation into Pali of the Sinhala name Datigama, a variant form of Dadigama. Evidence from coins and the palaeographic characteristics of an inscription found within the inner chambers of the stupa also supports Codrington’s identification. Hence it seems reasonable to assume that the objects recovered from the inner chambers of the stupa are datable to the time of Parakramabahu I, if not to an earlier chronological context.

When the first inner chamber of the stupa was opened on 2 July 1951, two lamps of exquisite workmanship were among the objects found within it. Lamp I
(Pls.1,2 and 3) was in a better state of preservation. It was carefully cleaned and, before long, the late A. Devapura had discovered the manner in which its hydraulic devices worked.\(^6\) By 8 August 1951 the lamp had been brought to Colombo and, "with temporary substitutions here and there," it was possible to demonstrate how it worked. A description of the find was first presented in a press release issued by the Archaeological Survey.\(^7\) A polemical essay by S. Shanmuganathan in which he questioned the claim made in the press release that the lamp was a unique find is the only paper exclusively devoted to the subject of the lamp published so far, but it does not add to the description presented in the press release.\(^8\) In the annual report of the Archaeological Survey for the year 1951 C.E. Godakumbura made only passing reference to the lamps and stated that a complete description of these finds would be given later in a separate publication.\(^9\) In a review of archaeological research in Sri Lanka, published in the Annual Bibliography of Indian Archaeology for the period 1948-53, Paranavitana presented more details about the lamps and reiterated his view that they did represent a "unique" archaeological discovery.\(^10\) However, in Godakumbura's Memoir on the excavations at Dadigama, which was probably the "separate publication" heralded in the Annual Report, the lamps received surprisingly limited attention and are in fact dismissed in a single paragraph.\(^11\)

Ever since the archaeological museum at Dadigama was opened in 1954, the two lamps have formed part of the collection exhibited there. Since Lamp I was restored to working order, it received the attention of both the public and the scholars. The second lamp has not received the attention it deserves, and, in fact, Shanmuganathan appears to have assumed that there was only one lamp.\(^12\) Of the two lamps, Lamp II reveals the ravages of time to a much greater extent. It has been exhibited in the state it was found till very recently when it was removed to the Archaeological Laboratory in Colombo for cleaning. As will be evident later on, in certain respects Lamp II is more useful to the student of early medieval technology. The damage inflicted by time has laid bare valuable information on the methods used in its production.

In their dimensions as well as the technology they represent the two lamps are almost identical, and it is in minor details like ornamentation that they differ from each other. It seems most likely that both lamps were produced by the same craftsman. Each lamp has two basic parts: i. the figure of an elephant which forms a
reservoir for oil and its base of the lamp with its *makara-torana*, and the chain which could be used to hang the lamp. The elephants are well-executed specimens of the tusked variety (See Pls.2 and 3). Each elephant carries a stick of sugar-cane in his trunk. There are two turns of chain around the neck. A rope is tied around the abdomen while yet another rope, thrown over the back, carries a bell on each side. Lamp I has two riders on the elephant. Both riders wear loincloths, and their long hair is gathered in a knot at the back. Their upper bodies are bare, except for the ear ornaments and the necklaces. Each rider wears large ring-type ear ornaments and two necklaces - one which is worn close around the neck and a longer necklace which extends up to about the abdomen. The rider in front, who is of larger physical proportions, carries an *ankusa* (Sinhala *henduva*), the instrument used for controlling elephants, in his left hand. The elephant figure is 14 cm. in length and, with the rider, it measures about 16 cm. in height. The elephant figure in Lamp II has only one rider who is represented as attempting to restrain the elephant by pricking it on the forehead with the sharp point of the *ankusa*. His body leans slightly backwards reflecting the physical strain of his effort. This elephant figure differs from that in Lamp I with regard to two other details as well. It has a decorative band on its forehead and its tail is represented as swinging to the left side while the elephant figure in Lamp I has no such forehead band and its tail is represented as swinging to the right side. Clearly these features had been deliberately introduced to give an element of individuality to each lamp. However, in all other respects they are quite similar and, in fact, the elephant figure from Lamp II can be easily mounted on the base of Lamp I.

The base of Lamp II is in too advanced a state of decay to yield accurate measurements, but it seems likely that the two bases were identical in appearance. The base of Lamp I (Fig.1, i & ii) measures 9.5 cm. in height and 22.5 cm. in diameter. It has a circular receptacle for oil, 17.5 cm. in diameter. Around the receptacle is a flat border, about 2 cm. in width and separated from the receptacle by a raised beading which was probably meant for the lighted ends of the wicks to rest upon. In the centre of the receptacle is a circular platform, 9 cm. in diameter, on which the figure of the elephant is mounted. This platform is formed of a bronze plate fastened with two strips of metal on to a protrusion rising from the receptacle (Fig.1, ii & iii). There are two slots on this plate. The larger of these is located in the centre of the plate and is meant to receive the oil when it is released from the reservoir inside the body of the elephant. There is a hollow tube which protrudes downward
for about 0.5 cm. from the sole of the right foreleg of each elephant, and the smaller slot on the platform is meant to receive this tube. The surface of the platform is above the level of oil in the receptacle while the hollow tube in the right foreleg of the elephant extends downward through this slot and reaches the level of oil when the receptacle is filled to capacity.

The makara-torana is fixed on hinges to the sides of the central platform. On either side of the torana is a figure of a rearing lion which supports a makara, and the arch of the torana which is decorated with the "flame" motif is represented as emerging from the mouths of the two makara figures. The total height of the torana is slightly less than 19 cm. The top of its arch, when swung into position, slides into a notch cut into the rider’s (the rider in front in Lamp I) knot of hair. This arrangement keeps the movable parts of the ensemble in place; and the arch can be swung back to permit the removal of the elephant figure from the platform on the base of the lamp (See Pl.2).

Extending from the top of the makara-torana is a chain for hanging the lamp. It is 106 cm. long and is relieved at 20 cm. intervals by three human figures: a danseuse, a cymbal-player and a drummer, in that order, starting from the makara torana. At the end of the chain is a hook in the shape of a cobra. There is another plain hook just above the figure of the cymbal-player, evidently to be used when a shorter length of chain was required to hang the lamp. The lowermost figure in the chain is that of the danseuse and it is about 7.5 cm. in height. She has a strikingly large knot of hair tied at the back, on the right side of her head. Her upper body with full and prominent breasts is bare except for a "string ornament" which was wound around the neck and then downward between the breasts and across the back where the end meet a band stretching downward form the neck. One can also detect that the danseuse is wearing ring-type ear ornaments, arm-bands and bangles (See Pl. 4). The lower part of her body is covered by a dress which extends below the knees but well above the ankles, and its elaborately arranged folds hang between her legs as she dances. Her left arm is swung across her body in the gajahasta mudra while her right hand adopts the kataka mudra. Both her legs are bent at the knees. The heel of her left foot is slightly raised above the ground, and this adds a further touch of movement and rhythm to the composition.

The figure of the male cymbal-player, which is next, measures slightly less
PLATE 4
than 7.5 cm. in height. Like the elephant riders, he wears a short loincloth, ring-type ear ornaments and two necklaces, and his upper body is left bare. His hair is tied in a knot at the back, but more on to the right side of the head. The third figure, which is 7 cm. in height, is of a male who plays a damaru-type drum, hung from a cord thrown over his left shoulder. As in the case of the other figures, no vestments cover his upper body. He wears a short loincloth and ring-type ear ornaments. The craftsman has executed this figure in a manner which emphasizes its individuality. The drummer’s hair-knot has been placed more to the left of his head. He has only one necklace which is worn close around the neck and, unlike the cymbal-player, he also wears bangles. The figures of both the cymbal-player and the drummer are portrayed with their legs bent at the knees and the left heels raised off the ground as in the case of the danseuse. Thus they appear to be either dancing or at least exuberantly keeping time with their feet in unison with the danseuse.

The craftsman has made a deliberate attempt, through clever use of ornamentation, to endow each of his two lamps with an individuality. In the execution of the figures of the elephants and the attendant figurines, he has evinced a remarkable aesthetic sense. He appears to have been generally careful to avoid monotonous repetition of details while in certain instances he deliberately repeated certain details to convey a specific message. His figurines of the musicians have been deftly executed and infused with vigour, grace, joie de vivre and, as noted above, with a sense of rhythmic movement through the repetition of a detail. As will be seen later, the amusing manner in which the controlling mechanism of the lamp was made to operate reveals that the craftsman was, in addition to being an accomplished artist, also a man with an impish sense of humour.

Godakumbura remarked that it was possible to detect certain similarities between the lamps from Dadigama and an object discovered in Sumatra which has been variously identified as a lamp, a censer and a dish for offerings.13) The site of the discovery of this object was in the Padang Lawas area, the home of the Batak people, in the upper reaches of the river Ack Barumun. Ruins of Buddhist monasteries which reveal the influence of the teachings of the Vajrayana school have been discovered in this area. A group of Buddhist figurines, found near Gunungtua, the major urban centre in the area, has been identified as a representation of the Bodhisattva Lokanatha attended by his consorts. An inscription on the pedestal dates the manufacture of these figurines in the eleventh
century A.D.\textsuperscript{14}) Attached to the unidentified object from Padang Lawas mentioned above was a chain decorated with figurines in a manner quite reminiscent of the decorations on the chain found at Dadigama. Van Erp has described the figures on the chain of the Sumatran object as follows:

"Very interesting are the fine bronze figurines which are introduced in the chain. All three are in a dancing attitude, the upper two being male. The latter bear a moustache and a broad, round beard and wear a short garment covering the hips, bracelets around the wrists and a pair of cymbals called eurings, joined together by means of a cord ... The second figure strikes a hand drum (damaru), which hangs from the left shoulder by means of a shoulder-belt...The lowermost figure represents a female dancer; her broad, high headdress is remarkable."\textsuperscript{15}

Thus it appears that the object found in Padang Lawas and the lamp from Dadigama shared the same "idiom" of ornamentation. In profile, the Sumatran object also bears a certain similarity to the base of the lamp from Dadigama. The drummer, the cymbal-player and the dancer are common motifs in South Asian art. However, as far as the present writer is aware, an object comparable with the finds from Dadigama and Padang Lawas has not been reported from any other contemporary South or Southeast Asian context. D.G. Kelkar has reported a lamp found in Rajasthan which has six decorative figures of musicians on its chain. He has dated it in the seventeenth century.\textsuperscript{16}) While the finds from Padang Lawas and Dadigama share certain common features, it is also noteworthy that some of the important elements of the Dadigama lamps, like the elephant-figure and the makara-torana, are not found in the object from Padang Lawas. And, if the latter was indeed a lamp, it certainly did not have a hydrostatically controlled oil reservoir which, as will be seen, forms an important element of each of the lamps from Dadigama.

It is clear that a good deal of forethought and planning went into the production of the two lamps from Dadigama. The complex process adopted in their manufacture is another aspect which deserves close attention. Of the various operations in the production process, two in particular, casting and joining (soldering or welding), are noteworthy. A careful examination of the elephant figure in Lamp I reveals that certain parts had been fashioned separately and then
joined together. Below the figures of the riders on the elephant, it is possible to detect traces of the alloy used for soldering them. The genital organ of the elephant, through which oil was released from the reservoir onto the receptacle below, had also been fashioned separately. On close examination, it becomes evident that, before this part was soldered on, a strip of metal had been inserted to reduce the size of the tapering passage inside the genitals and to ensure thereby better control over the outflow of oil from the reservoir (Fig.2,iv). In fact, when Lamp I was being cleaned, one of the riders and the part representing the genitals of the elephant had become detached and had to be welded back in place.\textsuperscript{17} The right foreleg of the elephant houses a tapering tube and, as described earlier, this tube extends about 50 mm. downward from the sole of the foot. It is clear that the right foreleg was hollow when the elephant figure was cast and that the plate forming the sole of the foot, together with its tube, was joined to it either by soldering it with an alloy or by heating the two parts and welding them together. Godakumbura appears to have assumed that the other legs of the elephant figure were solid.\textsuperscript{18} Though it may be necessary to resort to radiographic examination to ascertain the exact position, it seems justifiable to suggest on the basis of visible characteristics that all the legs were hollow when the elephant figures were cast and that the openings were subsequently covered with the plates which form the soles of the feet. The soles of the feet of the elephant in Lamp I bear indications pointing to the possibility that such a method of production had been used while, in the case of the elephant figure in Lamp II, the sole of the right rear foot had become detached. This plate is now lost. Since it is perfectly clear that both the right foreleg and the right rear leg are hollow, it seems most likely that our assumptions about the methods of production are correct (See Pl.5).

The art of soldering was known to craftsmen of Sri Lanka in late medieval times and it is possible to form an idea about this technique from the short description given by Ananda Coomaraswamy in the section on Kandyan metalwork in his Medieval Sinhalese Art:

"...the work to be soldered is placed on the fire and covered with charcoal and heated through, instead of directing a flame to one part alone. Different solders are used, melting more or less rapidly; and parts which must not be disturbed are also covered with a resistant preparation (powdered chinapaste) before the object is laid in the fire. The loose pieces to be
soldered are kept in place by a sticky paste of *olinda* seed rubbed down on a rough stone.\(^{20}\)

Spectroscopic or chemical analysis should prove useful for ascertaining the nature of the alloy used in soldering as well as to extract information about the composition of the metal used in the production of the lamps from Dadigama.

The use of moulds for the production of solid metal objects can be traced back in Sri Lanka to about the second century A.D. and it is likely that the so-called Laksmi plaques dated in this period were produced by the *cire perdue* method.\(^{21}\) Similarly, certain parts of the lamp such as the base, the *torana* and the human figures were probably produced by the *cire perdue* method. The production of the elephant figures presented a rather complicated technical problem since they had inner chambers which were meant to serve as reservoirs for oil. The technique of casting hollow (susira) objects was previously known in Sri Lanka though it was not very commonly used. The earliest known example of the use of this technique is a Buddha image found in the Badulla District. This image which measures 53 cm. in height is now in the collection at the National Museum in Colombo. Coomaraswamy dated it in the sixth century while Barrett has assigned it to the eighth century.\(^{22}\) In a more recent study P.S.P. Gunaratna has suggested that it should be dated in the seventh or the eighth century.\(^{23}\) She identified another Buddha figure from the National Museum collection as belonging to the *susira* group and assigns it to the eighth-ninth centuries.\(^{24}\) Several centuries later, the Kandyan craftsmen were casting hollow objects as a routine practice. In his description of their technique Coomaraswamy refers to their use of wax and of moulds made of fireproof clay obtained from ant hills.\(^{25}\)

Some of the details noted in the preceding paragraphs are useful if one were to attempt to reconstruct the methods used in the production of the elephant figures in the lamps from Dadigama. It has already been suggested that the legs were hollow. Evidently, there was another circular aperture, about 1 cm. in diameter, where the part representing the genital organ was later inserted to be soldered. Hence, in all, there were five openings into the cavity within the figure of the elephant. The first of the several distinct stages was the production of the core. The craftsman probably started with a core of fireproof clay in the shape of the cavity of the abdomen or the oil reservoir and then added to it five protrusions representing
the cavities inside the four legs and the opening in the abdomen (See Fig.2,i). These five protrusions would have helped to keep the core of the abdominal cavity in place inside the mould, but it is possible that, as an additional precaution, a few metal pins were fixed on the sides of the core. The second stage involved the application of wax to cover the core and to model the figure of the elephant (See Fig.2,ii). The application of fireproof clay to cover the wax and to form the outer wall of the mould represented the third stage (See Fig.2,iii). After it had been fired in a furnace and the wax had been drained, the mould was ready for casting. The five different openings into the cavity would have facilitated the removal of the core after the casting had set. It is not possible to provide a clear answer to the question why the figures of the riders were cast separately. Casting the elephant together with the riders would have been somewhat more difficult but not impossible.

It will have been evident from preceding observations not only that the two lamps from Dadigama were products of artistic merit reflecting the sensibility and skill of the sculptor but also that their production involved the mastering of complicated techniques of casting and soldering. Perhaps it is in the manner in which the lamps were designed to operate that the craftsman reveals his ingenuity most. The reservoir inside the elephant and the receptacle on the base of the lamp are both filled with oil before the lamp is lit. When the level of oil in the lower receptacle recedes below a certain point, oil is released from the upper reservoir through the genitals of the elephant to refill the lower receptacle, presenting the onlookers with the spectacle of a micturating elephant. By adjusting the size and the number of wicks, it is possible to regulate the frequency of these "excretory acts" of the elephant. Evidently, the tube housed inside the right foreleg of the elephant serves several purposes. It is through this tube that oil is poured into the chamber. Since it extends to the top of the abdominal cavity, it also acts as a trap which prevents the oil inside the chamber from flowing out through the right foreleg (See fig. 2,iv). Further, it controls the outflow of oil through the genital organ of the elephant figure. As long as the orifice at the outer end of the tube, which protrudes through the slot in the base of the lamp, remains immersed in the oil in the lower receptacle, no oil is released from the reservoir. As soon as the orifice at the lower end of the tube is exposed, thereby allowing ingress of air into the chamber inside the elephant, oil is released from this chamber till the level of oil in the lower receptacle rises again to cover the orifice at the lower end of the tube. It is clear that the craftsman had a thorough grasp of a basic principle of hydrostatics and, in
producing this device, he has blended this knowledge with artistic skill and a touch of rustic humour. The lamps from Dadigama belong to a genre of product found widely in the medieval world - "cunning devices" and "toys" made for the amusement of the court and the nobility. It is remarkable that, despite the gap of many centuries elapsed since they were manufactured, the lamps from Dadigama did not fail to provoke the response intended by the craftsman when they were demonstrated in 1951. "The lamp was successfully tested," states a report on this demonstration, "to the amusement of all witnesses." \(^{26}\)

Lamps with hydrostatically controlled oil reservoirs were also known in certain other parts of South Asia. In his *Lamps of India*, Kelkar refers to two lamps which had "a siphonic arrangement." \(^{27}\) Though he does not give a detailed description of these lamps, it is evident from the illustrations in his book that the lamps had a reservoir mounted above the receptacle where the wicks were placed. The outflow of oil from the reservoir appears to have been hydrostatically controlled. A close scrutiny of the illustrations suggests that there were five other examples of this type of lamp. \(^{28}\) Of the seven lamps, six have reservoirs in the shape of birds: three figures of peacocks and one each of parrot, pigeon and *hamsa*. \(^{29}\) In fact, one lamp has a reservoir in the shape of an elephant. \(^{30}\) All the seven lamps are from two particular regions in the western part of the subcontinent: four are from Rajasthan and the other three are from Gujarat. Two of the lamps have been dated in the seventeenth century while the other five have been assigned to the eighteenth century. There is yet another lamp with a hydrostatically controlled oil reservoir to be found at the Madras Museum while five more examples of this type are in the British Museum collection. The lamp from the Madras Museum has the receptacle for wicks mounted on a three-legged stand, and its upper reservoir is in the form of a peacock. \(^{31}\) It bears a certain similarity to the peacock lamp from Gujarat which Kelkar has assigned to the eighteenth century; \(^{32}\) but it has to be added that the lamp from Madras is of more elegant workmanship. Two of the lamps in the British Museum collection are said to be of South Indian origin and have been dated in the eighteenth century. \(^{33}\) One has a reservoir in the shape of a peacock with widespread wings \(^{34}\) and in the other lamp the reservoir is in the shape of a *hamsa*. \(^{35}\) Two of the lamps have reservoirs shaped like parrots. One of them is said to be from the Deccan and a date in the eighteenth or the nineteenth century has been suggested for it by the compilers of the list of this collection. \(^{36}\) The locality of the origin of the other lamp is not known, and no date has been
suggested for it.\textsuperscript{37} Stylistically, the fifth lamp in this category in the British Museum collection is very much different from the other four. Its oil reservoir is in the form of a figure of Ganesa. Evidently, it is one of the earliest acquisitions of this type of lamp made by the British Museum and is said to be of Nepali origin. It has not been dated.\textsuperscript{38} Apart from the last example from Nepal, all other lamps from the Indian subcontinent reveal a pattern of conformity with a certain scheme of arrangement of detail. In all these lamps, the controlling inging-device or the equivalent of the tube housed within the right foreleg of the elephant in the lamps from Dadigama is placed centrally in the lower part of the figure of the bird or the beast while the outlet for oil is located in front of the figure. This scheme of arrangement was sometimes rather rigidly adhered to, and this resulted in the loss of naturalism and the diminution of aesthetic appeal. In the case of the parrot-lamp from Gujarat, for instance, the legs of the parrot have been shifted to the rear, contrary to demands of realistic representation, in order to make room for the tube in the centre.\textsuperscript{39} Similarly, the appearance of the elephant-lamp from the same region suffers from the fact that the outlet for oil from the reservoir has been placed between the forelegs of the elephant while the controlling device which extends from the reservoir into the lower receptacle is located in the middle of the abdomen.\textsuperscript{40}

It will have been evident from the material presented above that the hydrostatically controlled lamp was certainly not limited to Sri Lanka and that it was known at least in four other cultural regions in South Asia, namely, Tamilnad, Gujarat, Rajasthan and Nepal. In his essay Shanmuganathan drew attention to another type of lamp called the Kandyan lamp in Sri Lanka and the \textit{tundavilakku}, "the lamp which does not need tending," in South India. However, as Shanmuganathan admitted, the manner in which this type of lamp works is different, and it deserves to be studied separately.\textsuperscript{41} A good number of the lamps mentioned in this paper are from the northern parts of South Asia. However, on consideration of their datings, it seems unlikely that this pattern of distribution points to a southward expansion of the technology necessary for their manufacture. It is noteworthy that the two lamps from Dadigama appear to have been produced about five to six centuries earlier than the other examples cited above. Further, it seems reasonable to suppose that progress in the knowledge of hydrostatics would have been more likely to be associated with the southern regions like Tamilnad and, in particular, Sri Lanka where irrigation technology reached the highest levels of its development in precolonial South Asia.
The craftsman who manufactured the lamps from Dadigama did not conform to the scheme of arranging the details which was rather rigidly followed by some of the men responsible for the production of the other lamps cited above. In fact, he appears to have displayed a remarkable ingenuity and imagination in the manner he located the controlling devices in his lamps. He also succeeded in producing naturalistic and aesthetically pleasing animal figures for use as reservoirs for oil in his lamps. While all other lamps cited above evidently incorporated the same basic device for hydrostatic control, the lamps from Dadigama further reflect the understanding the craftsman possessed of the fact that the proportions of the surface area of the lower receptacle would determine the amount of fluid released at a time form the upper reservoir and the duration of intervals between such releases. Larger the surface, the greater would be the amount of fluid released on each occasion and longer the intervals between releases. It was this understanding which led him to make as large a lower receptacle as was convenient and permissible on aesthetic considerations. Had he not done so, the visual effect of the working of the lamp would have been quite different and less impressive. Thus, in addition to being the earliest examples of hydrostatically controlled lamps known at present, at least in South Asia, on consideration of the imaginative conception and skillful execution they represent, the two lamps from Dadigama are noteworthy among lamps of this type found in South Asia.

The two lamps from Dadigama represent that union of art and labour which is possible only under certain conditions and in certain periods of human history. They also represent the remarkable combination within the craftsman, despite the restrictions and the division of labour imposed by caste, of such disparate accomplishments and skills as a remarkable aesthetic sense, a masterly grasp of the techniques of metallurgy and a sophisticated awareness of some basic principles of hydrostatics. He has utilized his knowledge and skills, adding to them a touch of humour, to produce objects which place him ahead of not only contemporary lamp-smiths but also some craftsmen of this category who came several centuries after him. This unknown craftsman deserves to be described as a man of rare genius.

Lamps from Sri Lanka or Ilavilakku as they were called are mentioned in South Indian inscriptions from the Cola period. An epigraphic record from Tiruvananmallur, dated in the twenty-eighth regnal year of Parantaka I (ca. A.D. 934), mentions the donation of a Sri Lankan lamp to a Hindu temple. In another
inscription, dated in the ninth regnal year of Rajaraja I (ca. A.D. 993), a patron of a shrine in Tirukovalur records the donation of a Sri Lankan lamp which he had purchased for two kasu. The kasu was a standard gold coin in the Cola kingdom equivalent to half a kalanjuri in value and thus the amount of gold paid for the lamp would have been about 4.7 to 5.2 grams. It was a fairly high price for a lamp. Yet another record dated in the twenty-fourth regnal year of Rajaraja I (ca. A.D. 1008), found at the Uttarakailasa shrine at Tiruvaiyaru, Sri Lankan lamps are mentioned together with two other kinds of lamps: lamps made in Malaya (Malaiyan-eyal-vilakku) and lamps produced in the Cola land (Coliyacciyal-vilakku). It is not clear whether Malaya in this inscription denotes Kerala or a Southeast Asian region. However, these inscriptions clearly indicate that a certain type of lamp was being imported from Sri Lanka to South India as early as in the tenth century. This was two centuries before the time of Parakramabahu I, the period to which the lamps from Dadigama have been assigned. Evidently, this practice of importing lamps from Sri Lanka continued at least up to the reign of Rajaraja I. Unfortunately, the information in the Cola inscriptions is too meagre to enable one to ascertain whether it was their aesthetic appeal or the technological characteristics which had created a demand for Sri Lankan lamps in South India.

The principle of hydrostatic control incorporated in the lamps from Dadigama is comparable with that of "constant-level containers" outlined in Philon’s Pneumatica. Sarton has assigned Philon’s work to the second decade of the second century B.C. The only known Latin version of the text is fragmentary, and it is the Arabic translation which has to be utilized by students seeking to understand Philon’s views. The Pneumatica presents a description of an experiment designed to maintain the fluid in an open container at a "constant level," any loss being replaced by the inflow from a bigger, sealed container. The release of fluid from the bigger container is regulated by an air-inlet pipe which is closed when the fluid in the open container rises to the required level. "And we must understand," Philon states in explanation,

"that the flow stops when the container is full because the end of the siphon is in the wine and nothing can flow from it (the bigger container) because it (the siphon) does not let in air in any place. But if some of the wine is taken and the siphon uncovered, then the flow takes place to the extent of the wine
taken because the air gets into the siphon ... And the three experiments which we have described belong to the sort with constant water level; use them as you will for a bath or a lavatory or a lamp; the method is the same.\textsuperscript{46}

Heron of Alexandria, who has been assigned to the first century of the Christian era,\textsuperscript{49} also speaks of devices capable of maintaining fluids in bowls and lamps at a "constant level." Heron's lamp was based on a concept different from the one outlined by Philon. It was fed with oil in proportion to the amount of water poured into the storage container placed above the lamp proper: "If water is poured in, it will replace the oil from below, so that the lamp is filled with oil rising through the other pipe."\textsuperscript{50} Heron was thinking of a sealed container with two pipes on top, and he seems to have believed that water poured through one pipe would sink to the bottom of the container, thereby displacing the oil and making it flow through the other pipe. Heron was not describing a lamp that had in fact been made, and he did not examine the practical problems involved in producing the container and the pipes in such a manner as to prevent the outflow of oil from both pipes. In this regard, Philon's description appears to be more instructive and capable of practical application.

It was not always that inventions of such fertile Mediterranean minds as Philon, Ktesibios and Heron developed further than the stage of a mere suggestion on paper. As A. G. Drachmann observed, these inventors "strewed their inventions broadcast; but unless the invention found a fertile soil, it could not thrive."\textsuperscript{51} Some of the lamps from Classical times found in Europe, like the bronze hanging lamp discovered near the Baths of Julian at Paris, are products of exceptional artistic skill.\textsuperscript{52} However, no hydrostatically regulated lamps of the type suggested by Heron have been reported among the rich and numerous archaeological finds in the Mediterranean region. The golden lamp which burned day and night at the altar of Athena on the Acropolis at Athens received special attention in classical literature. Tradition held that it was the work of Callimachus who lived in the fifth century B.C. Plutarch states that it was tended by widows.\textsuperscript{53} According to Pausanias, once filled with oil it burned for one whole year.\textsuperscript{54} It was the large capacity of the lamp and the slow-burning characteristics of its wick, rather than any special devices in it, which attracted the attention of those who saw the lamp. It was probably the forerunner of the medieval European lamp with its floating wick mounted on a buoy.
In his *Naturalis Historia* Pliny mentions the arrival of envoys from Sri Lanka at the court of the Roman emperor Claudius (10 B.C.-A.D.9). By the sixth century, several emporia which attracted merchants from many lands were located in this island, and Cosmas Indicopleustes who lived at this time speaks of them as "the greatest in those parts." Commercial and diplomatic relations would have provided adequate opportunities for the transmission of ideas. Lamps were evidently among the items of trade brought from the Mediterranean region to South Asia. Literary evidence points to the use of lamps of Roman make in South India at an early time. The Sangam work *Nedunalvadai*, which probably reflects conditions in the times of the early Pandyas, makes a reference to a lamp of Yavana craftsmanship being in use within the palace:

...there burns
A lamp with a statue of artistic work
Whose hands support a vessel full of oil
By Yavanas made. The thick wick brightly burns
With high red-coloured flame. From time to time
It's trimmed to rid the hall of widespread gloom."

Though the text does not clearly refer to a female figure, the description recalls to mind the type of lamp known as the *Laksmidvipa*. The term Yavana was used to denote people of western origin including Greeks, Romans, Persians and Arabs. It seems very likely that men of technical ability from the western lands were in demand and found employment in ancient South India. The old Tamil lexicon, *Cudamani-nikantu*, probably points to such a situation when it cites *yavanar* as a synonym for *kannalar* which means "smith" or "artificer."

Early Sri Lankan literary sources contain no references to the lamp trade, but a most interesting object relevant to the discussion was discovered some years ago during the excavations conducted at the site of the Jetavana monastery at Anuradhapura under the auspices of the Cultural Triangle Project (Pl. 6). It is a pottery vessel of foreign workmanship the shape of which is reminiscent of the *amphorae*, but it has only one handle and is perhaps best described as an *oinochoe*. An unusual and noteworthy feature about this vessel is that there is a small aperture on its handle. Liquid in the vessel can be poured out when this aperture is kept
uncovered, but if one were to place one’s thumb on it and close the aperture, the outflow ceases. \(^\text{60}\) The potter who manufactured this vessel had incorporated the same principle of hydrostatics on which the functioning of the lamps from Dadigama was based. The Jetavana vessel is decorated with a vine-like plant depicted in bold relief on the shoulder and a svastika on the side. As Folsom has pointed out, the left-pointing as well as the right-pointing svastikas were well-known among the motifs used on amphorae in the Mediterranean area for a considerably long period. \(^\text{64}\) The vessel belongs to a period later than the foundation of the Jetavana monastery in the latter part of the third century A.D. A date in the period between the third and sixth centuries has been suggested for another jar of foreign origin found at the same site. \(^\text{62}\) The vessel we have cited may have been either an object from the Mediterranean region or a product turned out in southwestern Asia incorporating concepts and styles which had their origin in the Mediterranean region. It is certainly one of the earliest examples showing the application of the principles of hydrostatics that Philon tried to describe. Thus it would seem that the trade in ingenious objects helped the spread of important scientific ideas from the Mediterranean world to South Asian lands like Sri Lanka. Apart from the Roman and Byzantine peoples who maintained trade and diplomatic contacts with Sri Lanka, Persians and Arabs played an important part as intermediaries in the trade between Sri Lanka and the west. It is likely that the role of such intermediaries was another factor which helped the transmission of the influence of Greek and Hellenistic writings in South Asia. From about the eighth century till at least the arrival of the Portuguese in the sixteenth century, the Arabs represented an important and, at times, the dominant element among the foreign traders in Sri Lanka. And, by the time these lamps from Dadigama were produced, such works as Philon’s *Pneumatica* had been translated into their language.

A certain fascination for automata and devices for remote control is evident in South Asian writings of medieval as well as ancient times. The *Siddhantasiromani* of Bhaskara (ca. A.D. 1150) as well as the *Suryasiddhanta*, a work probably written several centuries earlier, contain instructions for the construction of perpetua mobilia. \(^\text{63}\) The bent for speculation on such "ingenious" devices can be traced back to the time of the stories in the Jataka collection. \(^\text{64}\) It is also important to note that the sophisticated hydraulic civilization of Sri Lanka was at the peak of its development at the time these two lamps were produced. Technologists of those times could draw upon the knowledge of the nature and
behaviour of fluids, accumulated over many centuries in the construction of irrigation works. Under such conditions, it appears to be a distinct possibility that a "seed" from the Mediterranean world found fertile soil in distant Sri Lanka.

As Havell observed in the statement cited at the beginning of this paper, the contribution made by the craftsman to the development of ancient South Asian civilization did not receive due recognition in the writings of the chroniclers whose vision and approach were perhaps vitiated by caste prejudice. The values dominant in these early societies were such that it was usually the achievements of rulers, religious leaders and men of letters which received a high degree of attention and were recorded for posterity. While the production of objects of ingenious craftsmanship would have brought material rewards for the individual craftsman, as a group which belonged to the lower rungs of the caste hierarchy, the craftsmen failed to gain due recognition for the intellectual role they played in the development of technology and in moulding the dominant trends in aesthetics. The assessment of this role of craftsmen in society is an important task which confronts the historians of South Asia. While the study of technical treatises of the silpastra category would be most useful in accomplishing this task, the historian has to depend perhaps to a greater extent on the work of the archaeologists and antiquarians in order to make a proper assessment of the achievements of craftsmen. The lamps from Dadigama forcefully direct our attention to the crucial role played by this social group which preserved and drew upon the technological inheritance of their respective civilizations, enriched it with what they learned from other cultures, and produced objects of technical excellence and artistic merit which were the hallmarks of the civilization they represented.65)
NOTES.


4. Paranavitana has acknowledged his debt to Sorata for directing his attention to this information through a personal communication. See *Annual Report of the Archaeological Survey of Ceylon*, 1951, p. 33.


15. Ibid., p. 17. See also Pt. I.

16. D.G. Keckar, Lamps of India, Delhi, 1961, No. 94.

17. This information was conveyed to the author by Mr. A. Devapura.

18. See the illustration in The Kotavehera at Dedigama, Pt. LXVIII.

19. Abrus precatorius.


24. Ibid., pp. 95-6.


27. Keckar, op. cit. See illustrations Nos. 45 and 94 and comments thereon.


29. Ibid., Nos. 24, 45, 85, 87, 94, 112.

30. Ibid., No. 115.

32. Kelkar, *op. cit.*, No. 45.

33. British Museum Collection, Lamps bearing numbers 1919,11-4,49 and 1952,7-19,1. The following descriptions are based on the notes taken by the author when he examined this collection in April 1981. The author is grateful to Mr. W. Zwalf, Assistant Keeper of Oriental Antiquities at the British Museum, who most kindly permitted him to examine this collection.

34. British Museum Collection, Lamp bearing number 1919,11-4,49.

35. British Museum Collection, Lamp bearing number 1952,7-19,1.

36. British Museum Collection, Lamp bearing number 1953,5-14,1.

37. British Museum Collection, Lamp bearing number 1953,7-13,6.

38. British Museum Collection, Lamp bearing number 1893,3-17,7.


45. The suffix *riyal* in this record is probably a variant or mistaken rendering of *reyal*. *Maliyancivilakkku* may have denoted


48. This passage is quoted in Drachmann, op. cit., pp. 55-6.


50. This passage is quoted in Drachmann, *Ktesibios, Philon, and Heron: A Study in Ancient Pneumatics*, p. 124.


who helped to trace this reference.

60. The author is indebted to Dr Hema Ratnayake (Director) and Mr. H.D.P.A. Sarath Watakala (Chief Supervisor) of the Jetavana Project for permission to photograph the object and for information on the significance of the aperture.


64. "In all there were eighty great doors and sixty-four small doors, which all by the application of pressure (ākkantaya) on one peg (mani) were closed, and, similarly, on the application of pressure on another peg were opened. On either side there were hundreds of lamp-lit cells, also fitted with machinery, so that when one was opened, all opened, and, when one was shut, all were shut." See "The Maha-unnagga Jataka," *The Jatakas*, ed. E. Fausboll, Vol. VI, London, 1964, p. 432; *The Jatakas*, trsl. E.B. Cowell and W.H.D. Rouse, Vol. VI, Cambridge, 1907, No. 546, p. 223.

65. Research work for this paper was supported by grants from the University of Peradeniya. The assistance received from Mr J.G. Mahawatta who printed the photographs and Mr M.A. Nawaratne who prepared the figure illustrations is gratefully acknowledged.
LEGENDS

Plate 1. Lamp I from Dadigama showing the makara-torana and the chain.

Plate 2. Lamp I from Dadigama: Sideview with the makara-torana swung backward on its hinges enabling the removal of the elephant figure from the stand.

Plate 3. Elephant figures from Lamp I (left) and Lamp II (right).

Plate 4. Danseuse from the chain of Lamp I.

Plate 5. Bottom view of elephant figures from Lamp I (left) and Lamp II (right). It is evident from the picture of the figure on the left that the genitals through which oil is released from the reservoir were fashioned separately. It is also clear that the rear right leg of the figure on the right is hollow. Note the ends of the tubes which protrude from the front right feet of both elephant figures.

Plate 6. Pottery vessel found at the Jetavanarama, Anuradhapura. Note the upward protrusion on the handle. The aperture which controls the outflow of liquid from the vessel is located here.

Fig.1. Base of Lamp I: i.elevation ii.plan iii.details of platform

Fig.2. Probable stages in the production of the elephant figure: i.clay core ii.wax figure incorporating the clay core iii.mould made of fireproof clay iv.completion of assembly
EVOLUTION AND DEVELOPMENT OF ISLAMIC FUNERARY MEMORIAL ARCHITECTURE IN PAKISTAN

By
Ahmad Nabi Khan

Creating great and grand sepultures over the graves of religious or political personages of Islam is rather a late phenomena in Islamic architecture. While it was obligatory for every affluent Muslim to build a mosque in the areas of his influence, it was not altogether necessary that the grave of a Muslim, howsoever important and resourceful he might have been, should have a formal building to immortalize him. In the South Asian Subcontinent it was not until the influx of the military enthusiasts from Central Asia during the 11th and 12th centuries of Christian era that such edifices began to have been erected mainly over the graves of saintly personages. Indeed, it has not until the inauguration of the Moghul period in Pakistan that the graves of the Emperors and their elite started receiving such a distinguished treatment, though the practice of having such monumental buildings over the graves of the Sultans and Amirs of the earlier periods initiated much earlier in today's India.

The study of these Islamic funerary memorials in the Subcontinent has a history of its own. It covers a period of well over seven or eight hundred years and architectural historians and archaeologists of the earlier days like James Fergusson, James Burgess, Alexander Cunningham, E. B. Havell, John Marshall, Henry H. Cole, Henry Cousens, E. W. Smith, Percy Brown, G. Sanderson, V. A. Smith, Sayyid Ahmad Khan, Zafar Hasan, Ghulam Yazdani and many others contributed to it a great deal by analysing and synthesizing its various facets. Their works, particularly some of the memoirs and monographs of the old Archaeological Survey of India, dealt with important monuments or groups of such buildings admirably. Sir John Marshall's treatment of Islamic Architecture in India in the third volume of the Cambridge History of India was, for instance, the first ever analysis of the subject, which was later on developed and elaborated by Percy Brown in his Indian Architecture (Islamic period).

Pioneering and epoch-making though these attempts were, they generally lacked comprehension in their treatment, especially in studying the material available in the north-western regions which offered basic details for the study of its inception and adolescence. While they had no knowledge or access to the material relating to
its formative period especially of the days, when Arab influences penetrated in the areas of to-day's Pakistan during the 8th and 9th centuries of the Christian era, they whiled away specimens of the buildings specially centred around Multan by calling them merely a "provincial style", never appreciating its extent and importance which in fact extended to the vast north-western regions, now virtually the whole of Pakistan, and that it remained popular even until the beginning of the present century. Indeed, it was the only style in South Asia mainly represented by these funerary buildings which embraced such a vast area and lasted for a long period of well over seven hundred years.

After the creation of Pakistan, however, archaeological surveys especially the reconnaissances of the present writer, brought to light several hitherto unknown and unrecorded tombs and mausoleums located in various parts of Pakistan, particularly at Bela (Baluchistan), Adam Wahan (Bahawalpur), Multan, Uchchh, Sitpur, Muzaffargarh, Aror, Daira Din Panah, Jalalpur (Jhelum), Lal Muhra (Dera Ismail Khan), Jalalpur Pirwala, Kabirwaly (Multan) and Kot Mithan (Dera Ghazi Khan). These discoveries were of tremendous importance as they helped to build a coherent story of the inception, development and dissemination of the hitherto poorly understood and inadequately interpreted phases of Islamic architecture of Pakistan.

The nature and content of these funerary buildings is mainly baked brick, having two distinct styles. The first phase may conveniently be taken representing the "naked brick architecture" the specimens of which have constructed of finely baked bricks and faced with cut-brick for surface ornamentation where endless geometrical as well as epigraphical patterns and motifs have been created. The inspiration came undoubtedly from Central Asia, but the influence of local art-traditions especially of the Buddhist Stupas in Sind and Jaina and Hindu temples elsewhere has been considerable. The first known manifestation of such adaptation is found in a rather insignificant and forlorn small construction, the tomb of an Arab general and governor, Muhammad ibn Harun at Bela in Baluchistan. The governor ruled the areas of Makran during the later decades of the seventh century and was still active at the time of the Arabs invasion of Sind under the command of Muhammad ibn al-Qasim in 711. However, the tomb in its present shape may not possibly belong to that early date, though it is certain both historically as well as traditionally that the governor died at Bela and buried there. It appears that the structure might have been erected at a later date, possibly at the time of the second
burial when the influx of the Ghaznavid and Seljuqi art traditions had started coming in the Subcontinent. The tomb has three ancient graves inside, which is a simple square having slightly perpendicular walls. The zone of transition has been created by means of rudimentary type of corner-squinches which are devised and raised from the ground. The Mehrab has been provided in the centre of the western wall in the shape of a well-marked deeply recessed arch. The structure is conserved with a low dome which has lime terracing externally. The exterior of the four walls is of special significance which has been ornamented with a series of long and continuous friezes of cut-bricks having circles-in-contact, lozenges, diamond-shaped designs, intervened by a solid thick line.

The second example which provided invisible evidence of the development of the style is the mausoleum of Khalid Walid locally called Khaliq Wali. It is located in the village of Khati Chor in the Kabirwala district of Khanewal in Punjab. This outstanding funerary memorial is a monumental building. According to the epigraphical evidence on the body of the monument, it was built by ‘Ali Karmakh, governor of the areas of Multan under Shahab u’d-Din Ghuri sometimes in the beginning decades of the thirteenth century over the graves of the saintly personage who is said to have come here in the wake of the Ghaznavid military campaigns from Ghazna and stayed behind to preach Islam among the local people.

The fortress-like mausoleum has been erected on a high cultural mound containing the remains of a formidable city of Yore. A rectangle on plan, it is strengthened with perpendicular retaining walls having semi-circular bastions at irregular intervals on the four corners and in the centre of the walls on east, south and north. On the east is a projected solid frame indicating the back of the Mehrab and on the north-eastern corner, in between the two bastions is provided a staircase which leads to the tomb chamber on the top of the mound.

The main square chamber of the tomb is placed in the centre and, flanking it, are two rectangular halls, augmented with barrel shaped vaulted gallery running continuously on its four sides. The square of the main tomb chamber has been converted into an octagon by means of corner squinches. Above, the second zone of transition is created through a series of arched panels in recess, and on it is placed the round base of the dome. The interior shells of the dome is distinguished with a ring of chevrons. The exterior of the dome and the drum has lime terracing. The
dome is crowned with a three patelled finial. Later repairs have, however, spoiled the curvature of the dome.

The most important part of the mausoleum is its Mehrab created as an elaborate arched recess in the centre of the outer wall of the western gallery. The Mehrab is sunk deep into the thickness of the wall and the fronton and interior have been faced with cutbrick panels of different sizes and shapes. Within this double frame, which is slightly recessed, are square shaped pillarettes flanking and supporting the main arch, the shafts of which are faced with Quranic verses as well as historic details of the personage responsible for the erection, all executed in cut bricks in exquisite floriated and foliated Kufic characters. The interior of the Mehrab niche has been treated with plain cut and rubbed bricks, except the centre which possess a bold trefoil arch in high relief. The inner face of the trefoil is reveted with a series of circles-in-contact, again created in high relief in cut-brick.

The elaborate plan and fortress-like elevation was, however, never adapted by the later master-craftsmen and architects. However, two comparatively smaller tombs located at Alor or ar-Ror of the Arabs in the Sakkhar district in Sind and another small tomb in Muzaffargarh in the Punjab can be cited as the parallel examples as far as the treatment of their surface is concerned. The historic Alor once served as a provincial metropolis of the Rai dynasty which was subdued by the Muhammad ibn al-Qasim in 711.

The two domed brick-domes at Sakkhar in Sind are attributed to Saikh Shakarganj and Khatal u’d-Din Shah. Except that Shaikh Shakarganj was a Sayyid and that he was the contemporary of the famous saint La’l Shahbaz Qalandar of Sehwan, noting of historic interest about him or, for that matter, of the other is known though for long an annual urs used to be held regularly in their honour. Such activities have, however abandoned now and the ruined tombs stand neglected and desolate. Nor does any epigraph is available on the body of the tombs to record pertinent details, or for that matter the precise date of their erection. However, on stylistic ground as well as on the scanty historic reference, we may place them within a chronological bracket of the late twelfth and early thirteenth centuries of Christian era. Both the specimens seem to have been created simultaneously, or at best one after the other within a short span of time.
The two tombs are square on plan built in the traditional three storeyed style with high neck or drums and pronounced hemispherical domes crowned with wooden finials. Except the exterior of the shell of the dome which is lime plastered, the entire surface is unplastered depending entirely on cut-brick ornamentation which consist of a series of oblong panels and horizontal friezes. In effect, the entire surface on each side of the edifice has been divided into oblong recessed panels separated by means of flat brick pilasters in high relief. Narrow oblong arched openings have been pierced into the central compartments on all the four sides for entrance, including the western wall which has no customary Mehrab, while the space on its either side is treated with two broad oblong recessed panels which possess composite friezes of pseudo Kufic lettering and, below it, a thin frieze of circles-in-contact. The flat parapet has, likewise, been treated with elaborately designed friezes.

The third intricately ornamented brick tomb located in a village named Sadan in Muzaffargarh is the eternal resting place of a Saint named Sadan Shah, after whose name the village in now known. History does not, however record details of his life and achievements, while the folk tales tell that he was a descendent of a certain Arab, Tamim Ansari, who came along with the army of Muhammad ibn-al-Qasim in the early days of the 8th century and settled in the areas on the western bank of the river Chanab, and busied himself in preaching Islam among the local people. His later generations followed the practices of their progenitors including our Sadan Shah, and when he died, a brick tomb was erected over his grave by his devotees. According to these traditions which also go well to the stylistic characteristics of the edifice, this was the time when the Turkish Sultanate was under the sway of Gyiyas u'd-Din Balban and his eldest son, Sultan Muhammad, later known to history as Sultan-i-Shahid, acted as governor of Multan.

A study of this tomb, now in a much dilapidated condition, whose dome has also collapsed, reveals some very interesting characteristics of the evolution and development of Islamic funerary memorials in Pakistan. It is evident that the local society had by then gained a cosmopolitan character where local and foreign elements played their role happily and successfully, and that the talent of architects and artists of both the segments of the society was utilized unbiassing for creating masterpieces of this kind. The tomb is, therefore a rare synthesis of the two divergent art traditions Jaina/Hindu and Islamic.
Created entirely in bricks laid in mud mortar and finished in cut brick ornamental friezes and panels, it is square on plan raised on a high solid plinth. The four sides of the platform are also decorated with rectangular panels created in high relief, and finished in cut brick scrolls, while a double base moulding of circles-in-contacts separates the platform from the main body of the tomb. The delicate carving on the bricks is unique as nowhere else such a superb 'lattice work' has ever been achieved during such an early period. Above, are arranged as many as ten thin frieze of scrolls, dentils and diapirs. The continuous line of these mouldings is interrupted only by narrow trefoiled arched openings created in the center of each side for entrance. The surface above the mouldings has accommodated three oblong panels divided by flat borders. The rectangular frames flanking the openings are identically arranged with a flat border having psedu-Kufic motifs. The other three sides of the monument have been treated identically except that the broad frieze on the main entrance has the Surat al-Fath of the Qur'an with Bismillah. It has been placed within two other friezes of scrolls.

Internally the square plan has been converted into an octagon by means of well defined and bold corner-squinches to receive the round base of the dome or drum. The upper part of the squinches has collapsed and fallen. It is not therefore possible to determine the shape and arrangement of the dome. Like the two preceding examples, no Mehrab arch has been provided in the western wall, and all the four sides have low arched openings. It may be argued that except the main entrance on the south, the other three had terracotta screens, as has been a common practice with other such funerary memorials. However, no trace of such screen is available now. Secondly, the tomb has a well defined zone of transition created by means of true arch resting on bold double projected frame. The treatment evidently shows that the architect mason had full confidence in the mathematical calculation and proportion of true arch, not depending merely on the wooden base, as is noticed in the latter instances.

The last of the series of the naked brick structures according to our present state of knowledge, is the tomb of Shah Gardez located in the village of Adam Wahan near Bahawalpur in the Punjab. The square tomb has been built in mud-bricks with its outer and inner face faced with burnt bricks. On the east in the centre is provided the entrance in the shape of a narrow rectangular opening. The south eastern corner has yet another smaller door-opening for the staircase leading to the
circumambulatory gallery atop the first storey.

Internally, the top of the square first ‘storey’ is sealed with a wood courses upon which corner-squinches are erected to convert the square into octagonal. The core of the masonry is carried on wooden beams. Incidentally, this is the earliest appearance of the technique. The octagon of the lower ‘storey’ is crowned with a wood course and, above it, runs a double brick course arranged obliquely. The octagon has further been converted into sixteen sided through the same device to receive the round base of the high dome which is created entirely in burnt bricks which has lime-terracing externally. Four arched openings are provided at the base of the dome at cardinal points for light and air to the interior.

INTRODUCTION OF FAIENCE AND FAIENCE MOSAIC REVETMENT

The first phase of the naked brick architecture represented mainly by the funerary monuments described above, was replaced with the colourful faience revetment sometime in the late 13th century A.D., again inspired by the art traditions of Central Asia and brought over here by the Central Asian immigrant architects. The first known instance on which such a treatment has been meted out is the Mausoleum of Baha u’d-Din Zakariya-Suhrawardy and the patron saint of Multan. It is a very well known fact that Baha u’d-Din Zakariya, the progenitor of the Suhrawardiya Silsila, had been travelling extensively in art and cultural centres of Central Asia during his early life for education and training where he must have seen masterpieces of funerary memorials of the earlier period. Later on, his khanqah at Multan became the rendezvous of Central Asian immigrants. The saint used his own keen observation and the technical skill of the immigrants to create his eternal abode which was constructed at Multan during his life time. He died in 1262 and was buried in this tomb.

Built entirely of burnt brick, laid in mud mortar, the structure is square on plan having tapering walls and designed in three storeys, the upper most crowned with a grand hemispherical dome. Big archways with wooden screens, are provided on the east and north, while the west has the Mehrab in the shape of an archedrecess. The main entrance is provided through the southern archway, while the four corners of the lower storey are crowned with cylindrical turrets. The zones of transition have been created by means of corner squinches which have been placed on wood course,
while eastern archway has a panel of faience running on either side and atop, taking the form of a pseudo-Kufic meander.

As a result of the bombardment by the British army in 1848 nearly half of the tomb had collapsed, but was repaired immediately thereafter according to the original plan. It has underwent yet another phase of comprehensive repair in recent years to restore its original features including the naked brick surface, both exterior as well as interior, and the cut brick ornamentation.

The next specimen of the series is the tomb of Shahid Shahid in Multan. Known locally as Shah Dana, the Saint was a favourite disciple of Baha u'd-Din Zakariya. He was killed during an encounter with the Mongols at Multan in 1270, and his tomb was constructed by some prince from Khorassan in imitation of the tomb of his preceptor. Square on plan, the small brick structure is built on a low platform and is crowned with a pronounced hemispherical dome which has been placed on a high drum. The walls are raised slightly perpendicularly. As usual, the zone of transition has been created by means of corner squiches resting on bell-shaped wooden brackets. A rectangular opening has been provided in the southern wall, in front of which is added an enclosed verandah. In essence, it was a naked brick construction from top to bottom but was lime-plastered later on by some ill-advised enthusiast.

Likewise, the next funerary memorial, the mausoleum of Shams Sabzwari is also an outstanding specimen of the series of the so-called Multan style of Islamic architecture. Faced neatly and exquisitely with panels and friezes of faience and designed in traditional three storeys crowned with majestic hemispherical dome, the mausoleum is of prime importance as the precursor of the renowned Rukn-i-’Alam : Shams Sabzwari, a great Ismaeli da’i, spent much of his life-time in the propagation of the doctrines of his faith among the masses in the northern areas of ancient Pakistan specially in Multan and Kashmir. He settled in Multan where he died in 1276 and was buried there. The tomb was, however, erected over the mortal remains about half a century later in 1329.

The tomb built on a square plan, has three storeys with a well-defined hemispherical dome, placed on a high drum. The dome is reveted with square glazed tiles of light-green colour, and is crowned with a finial. The rectangular surface of the drum has been filled with oblong panels, separated through flat borders of brick-tiles worked out in relief. The whole of the exterior is covered with big and
small arched panels of faience revetment.

The tomb is built on a high platform within an open area enclosed by a perimeter wall with an entrance archway on the west. The terracotta and wood screens filling the arch openings are remarkable for their variety of geometric and floral pattern.

The mausoleum of Rukn-i-Alam at Multan has been called as one of the most splendid memorials ever erected in honour of the dead. The saint died in 1325 and was buried initially in the mausoleum of his grandfather temporarily. After sometimes, however, his coffin was transferred to the present mausoleum.

Standing in the north-western corner of the high mound representing the historic citadel, within a large rectangular enclosure, the mausoleum is octagon on plan with pronounced perpendicular walls, and supported by buttresses at the angles which taper sharply towards the top and carried up and crowned with small domed pinnacles, the mausoleum is constructed of finely burnt bricks of excellent quality and supported by timber framing. The main entrance is located on the south in the shape of an elaborate rectangular vestibule. A special feature of surface decoration on the exterior is a series of horizontal bands of wood along with the bands of moulded plain or glazed bricks.

The octagonal first storey rises up to a height of 41 ft. 4 in. on which is placed the second storey of similar octagonal plan, but comparatively smaller, thus leaving a narrow circumambulation all round the top of the first storey. The second storey, a tall octagonal drum, has much more elaborate treatment of surface ornamentation. On top of the second storey is placed the huge base of the grand hemispherical dome. The base is decorated with an intricate broad band.

The interior of the mausoleum, likewise, is decorated with bricks, both enamelled as well as cut-and-dressed, and the wood panelling. The wood framing is filled with bricks and brick tiles. The most significant feature of the interior is the elaborately decorative mehrab sunk deeply in the octagon on the west. It is an arched recess with slightly projected tympanum reveted with wooden framing possessing geometrical as well as epigraphical decoration. The decorative scheme consists of intricate floral scrolls and Quranic inscriptions. The Ayat ul-Kursi is carved in well proportioned Suls with tall, upright letters on beautifully decorated
ground of scrolls, double-stemmed vines carrying symmetrical and asymmetrical foliation and palmettes. Within this panelled frame of wood is created the arch decorated with a series of scrolls, while the central space of the sprandrels has a circle and a star in outline.

The Mausoleum of Shaikh 'Ala u'd-Din grandson of the great saint Chishtiya Silsila, is situated in the north east corner of the Faridi Khanqah at Pakpatan in Punjab. Square on plan, the edifice has three arched portals on the south, east and north, while the west has the Mehrab. The main entrance is on the south marked with a slightly projected rectangular frame, the surface of which has been divided into three decorative bands of fine cut-bricks running upright and at top. The central band possesses Quranic verses in Suls and Naskh characters, while the bands flanking it have interlaced diaper work. The exterior has been provided with broad panels, slightly recessed, and separated by means of friezes.

The significant feature of the interior of the mausoleum is the series of three wooden courses put at intervals. The exposed side of these courses has carved inscription, a unique feature of its kind known so far. The elaborately decorated Mehrab is sunk deeply in the western wall. It is an arched rectangle augmented with a slightly projected tympanum made of cut-bricks and ornamented with floral, geometrical as well as epigraphical patterns. The square chamber is converted into an octagon by means of corner-squinches, for the purpose of placing the round base of the dome. The corner squinches are created in the shape of arched rectangles sunk deeply into the thickness of structure. They are placed on three wooden beams set in the masonry obliquely. The exposed ends of the beams are carved in the shape of hanging bells. A wooden ring having dentil decoration put in the masonry at the base of the squinch, supports its brick work.

Among the tombs erected at Uchchh in the Bahawalpur district of the Punjab, the eternal abode of Bibi Jawindi stands out prominently. The pious lady was the daughter of Sayyed Jalal, a great-great-grandson of Jahanian Jhangasht, a famous saint of Suhrawardiya Silsila. She died in 805/1402 and was buried at the north-west fringe of the mound representing an ancient fort. Her tomb is said to have been built by a certain prince of Khurasan Muhammad Dilshad in 900/1493. In 1817 during heavy floods, half of the tomb collapsed and fell down.
Built of finely baked brick-tiles laid in well-levigated mud-mortar, it is octagonal on plan with pronounced perpendicular walls supported by buttresses at the angles which taper sharply towards the top, and crowned with pinnacles. The tomb depends entirely upon faience revetement, broad friezes of which cover the entire exterior of the edifice.

Likewise, the interior is faced with enamelled tiles and glazed lime plaster. The octagon of the first storey is converted into sixteen sided by means of a series of receding rectangular panels, the corner ones taking the shape of squinches placed on wooden brackets strengthened by a wooden beam placed below. The south east octagon of the lower storey has a staircase created in the thickness of the wall for access to the second storey.

The Mausoleum of Sultan 'Ali Akbar located in the suburbs of the ancient city has been called 'the little Rukn-i-'Alam because of its marked similarity. According to epigraphical evidence recorded on the facade of the mausoleum, Sultan 'Ali Akbar was a Isma'ili saint, and a great grandson of Shams Sabzwari. Built in 1585, the mausoleum is octagonal on plan with perpendicular walls strengthened with corner turrets, well-balanced and harmonious three storeys, all embellished with colourful tillery, and fenestration in glazed terracotta and carved wood. However, the edifice is exceptionally rich in faience revetment consisting of square, octagonal or oblong panels, designed according to available space. Each octagon takes the shape of a well-marked perpendicular wall strengthened with corner-buttresses which taper sharply towards the top, and is crowned with a low cupola, augmented with inverted lotus which has been used as the base of the finial. The buttresses flanking the main entrance are octagonal on plan, and are embellished with faience mosaic revetment, arranged in as many as thirty one friezes. The surface of the other buttresses is less ornamental, having only five friezes of glazed tiles. Likewise, the surface of each octagon has been divided into two oblong panels placed one upon the other.

The first octagonal storey rises up to a height of 37 ft. and 6 in. on which is placed the second storey of similar octagonal plan, but comparatively smaller in size, measuring 12 ft. 7 in. from outside, thus having a narrow circumambulation. The second storey has also been treated with faience revetment. Each octagon has three oblong panels. The angles of each octagon are strengthened with turrets rising higher
than the overall height of the octagon, and are crowned with cupolas. The battlemented parapet is distinguished by means of a moulding, while the turrets above the parapet are finished in white glazed plaster. On the top of the second storey is placed the base of the drum. Above it, rises the grand hemispherical dome marked by a pronounced caveto and a frieze of battlemented decoration. The exterior of the drum and the dome have been treated with lime terracing. The interior of the mausoleum is decorated with fresco panels of various shapes and sizes. The top of the lower storey is turned into sixteen-sided by means of well-planned and finely executed squinches, resting on moulding which, in turn, is placed on a row of brick brackets.

Here in this mausoleum, the use of wood as bonding or framing has been altogether discarded, and a fully developed and pronounced arch used for corner-squinches, and fresco has been used to decorate the interior as exclusive medium. The mausoleum therefore, is a significant attempt at opening new vistas of development in style, and assimilates in it some new techniques adopted and popularized by the Moghul architect elsewhere.

An almost identical example is noticed at Da’ira Din Panah in Muzaffargarh district of the Punjab. The Mausoleum is the eternal abode of a Bukhari Sayyid around whom several mysterious stories are woven. Sober history, however, points out that he was born in 1548 and lived a pious life to preach Islam. He died in 1602, and was buried at Din Panah. A mausoleum was erected over his grave, again in imitation of the Rukn-i-’Alam. The mausoleum is octagonal on plan with high perpendicular walls, supported by circular buttresses at the angles which taper sharply towards the top, and are carried up and crowned with ribbed or fluted domelets augmented with pinnacles. Like the tomb of Sultan ’Ali Akbar at Multan, the two buttresses flanking the southern main entrance are octagonal. As usual with the structures of the style, it is divided into three storeys. The sloping buttresses are crowned with cupolas and pinnacles. The octagons of the lower storey falling on the east and north have projected rectangular frames, accommodating decorative wood panellings, while on the west is a Mehrab, created in the shape of a recessed arch within the thickness of the wall. The exterior has decorative bands of glazed tiles.

The interior of the mausoleum is decorated with fresco or sico painting and glass-mosaics, all executed during the later days. According to the epigraphical evidence at site, the interior renovation was carried out in 1909. The modern
innovation has concealed original decoration. It is, however, interesting to note that the work has been executed by Multani artisans as recorded in various inscriptions in situ. The style of modern decoration betrays the impasse of local influences of the period, specially the elongated arches created in fresco remind the Sikh period’s practices. Several Persian and Urdu verses have been painted to fill up some of the horizontal panels. The base of the dome possesses last four surahs of the Quran, painted in fresco. Similarly, the interior shells of the dome is treated with palmettes and other floral patterns, and a shamsa at the apex.

A wealth of Arabic and Persian inscriptions decorate pertinent parts of the interior of the mausoleum. They are Quranic as well as non-Quranic scribblings providing not only historic information, but also revealing the fine taste of the designer who selected the Verses, and other Arabic quotations and Persian couplets. However, more interesting are the scribblings is Arabic as well as in Persian carved in ordinary Naskh on the tiles before they were fired for glazing. The subject-matter of these scribblings in both religious as well as historical, where names of the artists with dates and place names have been recorded. A study of the style of these scribblings, however, reveals that the artisans who executed them were semi-literate, or at best they did not have proficiency in the art of carving the letters on the tiles.

Yet another group of Islamic funerary memorials is located at Lal Mohra Sharif in the D.I. Khan district of the N.W.F.P. province. The tombs are created in the spirit of Multani Style, but have their own characteristics and personality both for their architecture as well as architectural decoration - faience mosaics. We do not know exactly the name of the saintly personages lying buried in these tombs. However, they are significantly important for the study of the evolution of the style, specially that it developed under the local circumstances. All the four monuments are designed on square plan having slightly perpendicular walls, while two of them have elaborate turrets which are also perpendicular. The exterior of these structures are decorated with panels and friezes of faience and faience mosaic-in the shape of diapers of various shapes. The square structures are crowned with pronounced domes. The square shaped lower storey has been sealed with a course of wooden beams. The zone of transition has been, created with the help of pronounced corner-squinches. Unfortunately, they are in an advanced stage of decay now. The date of the founding of these structures has been a dispute among various architectural historians. However, we may with some precision place them in a
chronological bracket of 16th and 17th century A.D., when they were erected one after the other.

CONCLUSION

This is indeed a brief summation of the popular and all pervading style of architecture evolved and developed for building the Islamic funerary memorials located in various places of Pakistan. It is significant to note that except one lone example at Sitpur in Muzaffargarh district of the Punjab, all of them are to commemorate saintly personages who spent the best part of their life time in propagating and preaching Islam among the local masses and met with tremendous success in spreading the religion. Significantly, the style confined within these areas almost exclusively and remained popular until the beginning of the present century, It therefore can truly be called the Pakistani style representing a rich, pleasant and harmonious assimilation and synthesis of the local and foreign traditions and characteristics of the art of building. Though the main centre of the style remained Multan and its environs throughout, where are still located its finest specimens, other centres like Uchchh, Muzaffargarh, D. I. Khan, etc., possess identical examples, but having their own distinct features and personality. Almost all of them followed identical arrangement of three storeys, perpendicular walls often strengthened with bastion and turrets, pronounced and tall drum and majestic hemispherical dome. The use of wood in the core of the brick masonry for structural stability has also been almost universal.

Of the series of the tombs and mausolea discussed and described above, two examples are of outstanding merit: the mausoleum of Khalid Walid and the mausoleum of Rukn-i-'Alam. They represent the climax of the two distinct styles: the cut-brick facing and faience and faience mosaic revetment.

The mausoleum is of sterling importance for the study of the evolution and development of the funerary architecture in Pakistan, nay in the whole of the South Asian Subcontinent, both from the point of view of its architecture, as well as architectural decoration. First, it is the earliest known dated example of the imposing mausoleum which has an elaborated Musallah in the shape of a deeply-recessed grand arched-niche. Secondly, the Mehrab-niche is crowned with a half dome and ornamented with cut-brick panels of different shapes and sizes,
again the earliest known manifestation of its kind in Pakistan. Thirdly, the arch so created is the true vossoired-arch attempted for the first time in this edifice, and with the discovery of this example, the earlier theories of John Marshall, Percy Brown and others regarding the first appearance of the true arch in the Subcontinent are to be modified. Fourthly, most of the decorative motifs are arabesques created here for the first time to fill up the blank interliner space, while some are also derived from the earlier local examples. This aspect is of particular interest as it shows not only the clear and unambiguous adaptation of the earlier Jaina-Buddhist art-traditions, but also the effective participation of the local master craftsmen in the project. Lastly, the fortress like formidable character of the grand edifice with perpendicular walls strengthened at intervals with semi-circular bastions, is also of particular interest as it appears here for the first time. Incidentally, this feature became the hallmark of the later so-called Tughluq style of architecture.

The mausoleum of Shaikh Rukn-i-‘Alam which has been rightly called ‘the most magnificent tomb ever erected in honour of the dead’, is unique for its architecture as well as architectural embellishment. It is a remarkable specimen of majestic strength and solidity and is equally noteworthy for its most sophisticated surface decoration. Indeed, it was for the first time in the history of Islamic architecture of Pakistan that the care, interest and monetary resources of a spiritual luminary were combined with the proficiency, experience and devotion of a master architect and a host of masons and artisans to create such a masterpiece. These combined efforts have been responsible for a number of innovations never before practised in the art of building in the Subcontinent. The octagonal plan adapted for the edifice was introduced here for the first time, and until then no architect had ever tried the difficult plan due to its geometric complexities. The usual practice was to use the more simpler square form adapted from the Zoroastrian fire temple. Indeed, throughout Central Asia the early funerary constructions were of square form. The elaborate and sophisticated ornamentation including the brick work, wood work and the tile and tile-mosaic work is also an experimentation never before exercised in such profusion.
DISPLAY OF THE RELICS IN EARLY BUDDHIST ART

By

K. R. Van Kooij

DISPLAY OF THE RELICS IN EARLY BUDDHIST ART

This paper is partly continuing a short discussion I had with our host and friend Dr. Roland Silva when he took his Ph. D. degree at Leiden University a few years ago. As usual in Holland, the debate during the ceremony was limited to a few questions of each opponent, and short, appropriate, answers of the candidate. As you might have expected, Dr. Silva played this role excellently, and proved moreover to be a most generous host when afterwards the degree was celebrated. I was honoured to be his guest, as I am now honoured to be the guest of the Archaeological Department of Sri Lanka.

Our short debate was about the ritual deposit box (yantragala) and the number of relic boxes (dhatugarbha) in a stupa (Silva 1988, 26-29). Afterwards it occurred to me that the main difference between relics and deposits may be that relics are displayed and honoured as if being the Buddha himself. The custom of displaying a relic or rather a relic casket, for instance on the platform of a stupa which is in course of construction, is recorded in several Sri Lankan Pali- and Sanskrit texts, as it has rightly been noticed by Silva (1988, 31). The relic cult is exclusively Buddhist.

Deposits, however, have the function of consecrating a building or part of a building, and they are not exclusively Buddhist. Deposit boxes are known from Hindu temples as well in both South- and Southeast Asia (O'Connor, 1966).

The display of relics as a Buddhist religious ceremony started to rouse my curiosity and brought about a series of questions. How old is the custom of exposing relics? On what kind of occasions were they exposed and worshipped? Can art history provide us with answers to these questions?

However, the display of the relics is not an easy subject indeed, if only for the reason that all my Sri Lankan colleagues have grown up with the famous ceremony of the Kandy Perahera, which is meant to expose the famous relic of the Tooth.
As a matter of fact I would like to draw your attention, mainly to the earliest forms of the cult of the relics. For this short study the sources used consist of three categories:

(1). visual material contained in Sanskrit and Pali sources dealing with showing the Buddha’s relics.

(2). visual material contained in Buddhist art of the early period, i.e. before the beginning of the Christian Era.

(3). Accounts of modern Buddhist lay ceremonies which may reflect ancient customs.

As to the first category, recent research by the French Buddhologist Andre Bareau brought up some important theories regarding the formation of those parts of the canon that deal with episodes of the Parinirvana of the Buddha, in particular the Mahaparinirvanasutra (MPS). These theories have a bearing upon the age of the Buddhist cult of the relics and are of great importance for the historian of Buddhist art.

In respect of the second category, i.e. the art historical material, I would like to put forward an unusual interpretation. This is based on the hypothesis that religious practices, more than literary texts, created a model for a visual rendering of scenes referring to the life of the Buddha in general and to the Parinirvana-scene in particular. Moreover, Buddhist art of the earliest period conforms to the literary accounts in that little attention is paid to the life of the Buddha as a continuing life-story from conception to Parinirvana. Scenes from the Buddha’s life seem to follow other patterns.

As to the third category, I discovered that very little is known about Buddhist ceremonies in ancient India, at least as far as lay ceremonies are concerned. What we do know are ceremonies performed in modern Asian countries where Buddhism still is a living religion, for instance in Sri Lanka, Thailand, Burma and also Japan. This does not necessarily mean, neither that lay ceremonies were unknown to ancient Buddhism, nor that all Buddhist rituals more or less resembled Hindu forms of worship. On the contrary, Buddhism from its very beginning was eager to establish its own identity by creating new ritual forms. It does mean, however, that we have to rely on indirect evidence, starting from the presupposition that a number of ceremonies still occurring in modern Buddhist countries reflect ancient customs.
As an example, I would like to make a short digression. When in Sri Lanka someone wants to become a monk and is admitted to the sangha (the upasampada-ceremony) he leaves the house of his family in a festive procession, dressed in the luxurious outfit of a Kandy prince, riding on a horse, surrounded by a large retinue. A parasol is held over his head as a token of honour. The same custom is, or quite recently was, practised in other Theravada - countries (Bechert-Gombrich 1984, 34-35) and is regarded as a re-enactment of the Buddha’s Great Departure (Levy 1957, 6-7, 27 note 1). In Cambodia "the novice rides.. on a horse that is white, the same colour as Kanthaka. The bridle of his horse is held by an 'India', the parasol over his head by a 'Brahma'. The parents and friends who go with him bearing offerings and uttering cries, represent the gods praising the future Buddha. A friend will often mimic Chandaka, the faithful squire, by clinging to the horse’s tail" (Levy 1957,8). Even Mara’s army is present in a group of men and women clothed in fancy dress.

Indirect evidence about the existence of such a ceremony in ancient India comes from literature and from pictorial art. True, the prince Siddhartha left his father’s palace in the middle of the night, only accompanied by his horse and his groom, but legend has it that he soon became surrounded by a growing company of Yaksas and Devas, among them Indra and Brahma.

Buddhist art clearly emphasizes the festive character of this important moment in the life of the Buddha. A relief in Bharhut (Coomaraswamy 1956, pl. XV, fig. 38) depicts the palace and two court-ladies looking at the departure of the prince. The horse Kanthaka is accompanied by an invisible retinue holding cauris and a parasol. Three Devas are present and of course the groom Candaka. In the lower panel two other Devas are added, one playing a drum.

The splendid carving on the middle architrave of the east torana of the great Sanci stupa (Marshall and Foucher 1982, 126 and pl.40, 2) according to the usual interpretation, represents the episode of the Great Departure of the Bodhisattva. The departure, however, takes place in broad day-light and is witnessed by large numbers of people. Apart from the groom, there are four Yaksas supporting the horse, Devas carrying camaras and the parasol, or making gestures of adoration, and possibly Mara who tries to stop the Bodhisattva.
In the centre a little ceremony is going on at a tree, which in Schlingloff's view might refer to the first meditation under the Jambu-tree if only this episode were not completely out of place in the Great Departure scene (Schlingloff -1987,5-6). However, the ordination ceremony is traditionally concluded by a confession (pratimoksa), after which "parents and friends of the new monk offer gifts to the samgha... and follows a sprinkling of lustral water" (Levy 1957,12). The ceremony at the tree seems to refer to this part of the ordination procedures.

The offering of gifts and the sprinkling of water is clearly indicated by the artist of the Sanci relief. Figures bringing gifts and another personage with a pitcher stand near the tree to which the gifts are symbolically made.² The pouring of water confirms the gift. Another man with a pitcher, richly dressed, is pictured near the footsteps to the right side. The pitcher may refer to the solemn rite when "the newly ordained monk, in order to call the earth to witness his undertaking to observe the rules and precepts of the religious discipline... takes a small flask of water and pours out its contents on the ground, in accordance with ancient custom" (Levy 1957,12).

These details prove, firstly that the little ceremony at the tree has been intended as a picture of the donations that are given at the conclusion of the ordination, and secondly that the procedures of the ordination ceremony determine the composition here, and not the episode of the Great Departure.

The absence of the person of the Bodhisattva is usually explained by the aniconic character of early Buddhist art. In her recent book on the Art of Ancient India, Susan Huntington makes the intriguing remark that the reason for this absence is not aniconism. The scene is not a record of the 'historical' moment itself "but rather a processional celebration of it at a later time" (Huntington 1985, 99). She suggests that actors are performing a re-enactment of this episode.

This challenging proposition may now be carried one step further. The carvings at Bharhut and Sanci point to an early example of the Buddhist ordination ceremony (upasampada), similar to what can be perceived today. When designing this composition the artist at Sanci was no doubt guided by the festive departure of a rich citizen of Vidisa leaving for the nearby monastery in order to become a monk. Considering the large number of monks living in the Sanci monastery at that time,
this ceremony must have taken place quite frequently and openly. It could have easily been witnessed by any artist many times. Like in present day Sri Lanka and until recently in Cambodia, the ceremony itself was meant as a re-enactment of the Great Departure of Siddhartha. No actors were needed.

The artist did not illustrate a literary text either. He did not depict a scene of the past, but he carved a contemporary picture of a ceremony that could be witnessed by anyone, and that should remind lay Buddhists that becoming a monk is something to be proud of. In Amaravati (Sivaramamurti 1956,166 and Fig. 5), the scene of the Great Departure is the first of the four great moments in the life of the Buddha, since it is the first step of lay Buddhists to monkhood.

Another example of this ceremonial aspect of early Buddhist art is the way in which the Buddha’s mindfulness (buddhanussati) is practised by paying homage to his seat. I came across a moving passage in the Samantapasadika, written by Buddhaghosa in the fifth century. A month after the Buddha’s Parinirvana the reverend Ananda reached Sravasti and gave a sermon to the people on impermanence. "Soon after the instruction, he entered the Jeta-park and opened the room of the Buddha, lifted the seat of the Buddha, brought it out, cleansed it, entered the room and swept it clean. After sweeping it clean, he took out from the room the withered flowers that were offered (to the Buddha) and threw them away. He carried back the seat of the Buddha, placed it as it originally was, and revered Ananda offered the same kind of worship as when the Buddha was alive and in no way different." (Bapat and Hirakawa 1970,4).

In this text Ananda sets an example how people should pay homage to the Buddha’s seat. This rule has been laid down by Buddhaghosa in his commentary on the Vinaya but it no doubt confirms ancient practice to keep the spots where the Buddha had stayed meticulously clean and to pay homage in the right way. It is this kind of ceremony which is rendered in sculpture, when the Buddha’s empty seat is depicted. The artist may surround these images with legendary scenes which were transmitted at that specific place in order to keep the Buddha’s memory alive, but the term aniconism is misleading and does not justice to the character of early Buddhist art.

These examples have led us away from the main subject of this paper, namely
the display of the relics. However, we will see that here a similar mechanism is at work. The display of the relics is interconnected with a group of legends that arose around the Parinirvana of the Buddha, and with pictorial representations referring to this ceremony. The classic account of the MPS has been amply discussed by a great number of scholars and hardly needs further comment. However, I have to present a visual analysis of this text in order to make clear that the ceremony of exposing the relics influenced the pictorial record as well.

Thereafter, I will briefly discuss the evidence that is contained in Asoka’s Ahraura inscription. Next, I intend to give an interpretation of the visual material of early Buddhist art with regard to the Parinirvana theme, assuming that the reliefs intend to represent contemporary lay-ceremonies rather than an episode from the Buddha’s life. The episode may have served as a kind of mythical background which was brought to life in these ceremonies but it did not determine the composition.

It is necessary to analyse the text which is contained in the MPS, simply because it is the earliest evidence of a cult of the relics which is more or less datable. It is worthwhile to have a closer look at the visual aspects of this story, and to discuss the recent dates proposed by Bareau (1979, 76) for this part of the MPS. As is well-known, the Buddha himself is supposed to have pronounced the precepts for his cremation to his disciple Ananda. His rules are simple and straightforward, although containing quite unexpected details. I prefer to give in full the relevant passages of MPS 36.7, and 46.7, because the brief quotations that are usually found in art historical literature are not sufficient for a visual analysis. I quote from the Sanskrit version (Waldschmidt 1951, 360), which is regarded as the oldest one.

"The body of the universal king (cakravartinah) should be enveloped in unwashed (new) cotton; after it has been enveloped in unwashed cotton, it is enveloped in a thousand (cloths); after it has been enveloped in a thousand (cloths), it should be put into an iron trough filled with sesame oil; after it has been covered with another (iron) trough, a funeral pile is piled up with blocks of fragrant wood; (the body of the universal king) is cremated; it is extinguished with milk from the cow. The bones are put into a golden urn, which is placed upon a litter; a relic (sarira) stupa is erected on a crossroads; parasols, banners and flags are fastened and a festival is held; it is honoured, adored, respected, worshipped with fragrances, garlands, flowers, incense and music. In this way only (it is done) for a universal
king, Ananda; the more so for a Tathagata Arhat Samyaksambuddha. So far the precepts of the Buddha as related in the MPS.

Unexpected, and almost unknown in India, is the rule about putting the body into an iron trough with oil, as Bareau rightly remarks (1975, 155f.). The precept is only understandable in case of lengthy preparations for a royal funeral ceremony, where conservation of the body became necessity, but not immediately before cremation.

The cremation itself is nothing unusual in ancient India and it became an established practice for every buddhist monk. But it certainly was exceptional for an Indian ascetic who, as a rule, was buried. Probably the Buddha did not want to be considered a brahman ascetic and deliberately preferred a normal kind of funeral.

The procession and the following deposit of the bodily remains in a stupa erected on a crossroads is likewise very unusual. Contrary to the Vedic burial mound (smasana), which is erected far away on a spot where nobody will ever return, the stupa is meant to attract people (Bareau 1975,160 ff.). Parasols, banners and flags are fastened precisely for this purpose. The addition: on a crossroads, i.e. a place where four main roads (mahapatha) meet, probably conveys a similar meaning: the stupa should have a considerable size, it should be visible from afar, it should draw everybody’s attention. This effect is further enhanced by the festival (mahas) that is regularly performed at the stupa.

On the whole, apart from the cremation itself, these precepts sound rather unusual as funerary rites and do not follow ancient Vedic funerary traditions either, despite the efforts by a number of scholars to reconcile them. Certainly, the rules just quoted are supposed to resemble the funeral ceremonies of universal kings (cakravartin), as the text itself makes clear. Surprisingly enough, the Mallas from Kusinagara seem to know nothing about these ceremonies and are eager to be informed about the way the body of a cakravartin should be honoured. The audience of the MPS probably needed to be informed as well.

The precepts are carried out in due course, but the ceremony is further enlarged in a magnificent way. This passage too is worthy to be followed in some detail because of the many visual images contained in it. I would like to confine myself to
these elements only, leaving out repetitions and intermissions that do not form part of the ceremonies themselves.

The Mallas make clear to Ananda that they cannot carry out the matter he had spoken about, at least not in one, two or three days. They need seven days, and in the meantime they call upon all people for miles around to come and to worship the body of the Holy one, which is still lying on the lion’s bed. Then, young Mallas, men and women, stretch a canopy over the body, which is made of cloth. The men seize the litter and while the body of the Holy one is worshipped with perfumes, garlands, flowers, incense and music, they enter Kusinagara through the western gateway, walk right through the centre, and leave the city through the eastern gateway. The body is brought to a sacred place which is significantly called Makutabandha, i.e. "crown-fillet".

Thereafter, the body is enveloped in cotton cloths and put into an iron trough filled with oil, covered with another iron trough, and placed upon a funeral pyre made of fragrant wood. After Mahakasyapa has arrived to take leave of the deceased Buddha, the pyre catches fire. The fire is extinguished with cow’s milk. The Mallas of Kusinagara then put the bones into a golden urn, place the urn on a golden litter, and while paying respect, homage, honour and worship with perfumes, garlands, flowers, incense and music, they enter the city and place the urn on a great platform (mahamandale) in the ‘excellent residence’ (agrahara). They pay respect, homage, honour and worship with perfumes, garlands, flowers, incense and music.

However, the Mallas never had the chance of depositing this urn in a stupa. Legend has it that seven neighbouring kings claimed the relics in order to deposit them in stupas built on their own territory. The arrival of these seven kings, or their representatives, together with their fourfold armies at the city of Kusinagara is described in some detail, as is the war that almost broke out between the Mallas and their adversaries. Then follows the intercession of the Brahman Dhumrasagotra (Drona, in the Pali version) and the following division of the relics.

The return of the kings to their own territories is only briefly mentioned: Each king receives his share of the relics, gives orders to build a relic-stupa in his city or village, to place parasols, banners and flags upon it, and to perform festivities (mahas) by paying respect, homage, honour and worship with perfumes, garlands,
flowers, incense and music.

A visual analysis of the literary description of the Parinirvana rites in the MPS should isolate what actually can be seen in such a ceremony from verbal exchanges. The following visual divisions of the ceremony can be distinguished:

1. paying homage, namely in three situations,
   a. to the body still lying on the couch;
   b. to the relics in the golden urn, which is displayed on a platform in the royal hall of Kusinagara;
   c. to the stupas in which the relics were enshrined.

2. Procession,
   a. with the body on a litter through the city of Kusinagara;
   b. with the golden urn, also placed upon a litter, after the cremation;
   c. of the seven kings carrying their share of the relics to their own territory.

The ritual acts of paying homage and procession alternate with each other in a harmonious ritual composition. These parts may have served as a focus for the storyteller and his audience, making the story both familiar and attractive. They likewise became the keystones for the pictorial artist to build up a visual image of the rites of the Buddha’s Parinirvana.

The events around the Parinirvana of the Buddha as related in the MPS have come down to us in a number of different versions: Sanskrit, Pali and Chinese. The comparison of these sources, a thorough analysis of their contents, and sound reasoning brought Bareau (1979, 76) to a number of fascinating conclusions. The most exciting result of Bareau’s research is perhaps that he is convinced that the final episodes of the MPS, i.e. the parts about the Parinirvana rites, reflect developments that took place in the second half of the 4th century B.C. in the period just before or during the rise of the Mauryas. If the recent tendency to place the date of the Buddha’s Parinirvana some eighty years later is followed, these developments should have taken place considerably later, probably not long before the rise of Asoka.

The consequence of the research of Andre Bareau might be that the Buddhist
cult of the relics, and the erection of stupa's in order to enshrine them, became an
established practice only when the first Mauryas were extending their kingdom over
the North of India. At that time, the relics of the Buddha not only became the centre
of devotion in particular for the laics but developed into one of the most important
tokens of universal kingship as well. Gombrich (1988, 123) rightly observes that the
cult of the relics is "a Buddhist invention". The legend about the Buddha's funerary
rites authorizes these practices, which became standard throughout the Buddhist
world.

The passages about the threatening war of the relics, the division of the relics
and the erection of the first stupas in eight royal cities could only have been written
when kings considered the relics of vital importance for the legitimation of their
power. This situation may have arisen in the same period, when the first Mauryan
kings started to build stupas and pillars to mark their newly conquered territories.4

All these phenomena seem to be new developments, belonging to a period
when Buddhism became a full-scale religion. Buddhism needed new religious forms
to distinguish itself from Brahmanical of Hindu religion. The stupa too should be
considered as a new architectural presentation of Buddhism, coming into being
about 300 B.C. The same is valid for the caitya-hall, which may have been inspired
by the form of the royal assembly hall but became a type of architecture that is
characteristic for early Buddhism. In such a hall many people came together both
to honour the Buddha's relics and to perform a number of other ceremonies such
as preaching, ordination or confession. The liturgical functions of these halls are
still insufficiently known and need further examination.

It is important to notice that paying homage in the way as described in the MPS
is essentially different from worshipping Hindu deities. I think that Bareau
(1975,178/179) is quite right to underline that the Buddha was not considered a god,
for the simple reason that he did not receive any form of nourishment or sacrifice.
The Buddha is honoured with perfumes, garlands, flowers, incense and music,
gestures of adoration, briefly by what is aptly called mahas, a festivity. A mahas is
something quite different from puja or sacrifice. Mahas is rather a new ceremony
that has been introduced as a Buddhist substitute for the Hindu puja.

Moreover, the worship of the Buddha is a matter of the whole Buddhist
community, open to any one and without the mediation of priests (Gombrich 1988, 124). The architectural and ritual forms chosen by Buddhism reflect these new religious attitudes.

The first case of a display of the Buddha’s relics on a platform inside a hall or enshrined in a stupa, and during a relic procession, can thus be dated to the end of the fourth century B.C. at the earliest. The MPS has laid these practices down in a verbal accout for the first time. People had to learn about them. Pictorial art is considerably later in depicting these ceremonies, at least as far as we have testimony of it in the reliefs of Bharhut, Sanci and Amaravati. This gap of more than a century remains difficult to explain.

If we follow a chronological order, we should first have a look at an extraordinary inscription of the emperor Asoka, in which a display of the bodily relics of the Buddha is mentioned, i.e. the Ahraura inscription, which was discovered in 1961. The inscription declares that Asoka has become an upasaka two and a half years ago, and that he became a zealous devotee of the Buddha for little more than a year. During this short period people became "commingled with the gods" (Sircar 1979, 82), i.e. were living in a golden age as a result of practising the Buddha’s dharma (Sircar 1979, 77).

The inscription ends with a line which is much debated. I am following Norman’s interpretation that the inscription originally ended with the statement that "this proclamation has been promulgated throughout the whole world on day 256, i.e. reckoned from the beginning of the regnal year" (Norman 1983, 281). The line, however, has caused a number of palaeographic and philological problems, as the concluding part is not found in the other versions of this Minor Rock Edict. Norman is closely following Sircar’s rendering of the end of this line when he reads ‘ammamca (m) budhasa salile alodhe’, meaning: "after the body of the Buddha had mounted the platform (manca)".

Whether these last words are the result of a correction made by the scribe or sculptor, or whether Asoka himself is responsible, is an intricate philological problem that does not need to concern us here. The important information is that in one of the earliest inscriptions of Asoka a platform is mentioned for showing the relics of the Buddha. It points to the practice of exposing and honouring the relics
before enshrining them in a stupa.

I agree with Norman that the sentence "might be a reference to a re-enactment of the Parinibbana happenings as part of the re-interment ceremony" (Norman 1983, 282), but I do not think that this re-enactment involved that someone, playing the role of the Buddha, mounted the manca. I understand that Asoka probably exposed the complete relics on the manca before their division and enshrinement in a large number of stupas.

It is not known how Asoka obtained all these relics. A work as late as the Thupavamsa (Jayawickrama 1971, 53) describes in detail all the efforts of Asoka to recover the relics. According to this story, Asoka proved to be the first amateur archaeologist. After he had searched in vain in Vaisali, Pava and Kusinagara, he ultimately found the relics when excavating an underground stupa, hidden in Rajaghrha. It has been suggested that at Asoka's time nobody had any knowledge of the place were the Buddha's were buried (Bareau 1975, 182). It may be assumed, however, that Asoka found the relics when they were needed.

Our second case of a display of the relics can thus be dated to the reign of Asoka not long after he became a zealous upasaka and before the Ahraura inscription was written down, i.e. about 258 B.C. Shortly thereafter, Asoka must have started his famous building program of 84,000 stupas in cities and countries which were under his sway. This does not necessarily involve that the relevant ceremonies of displaying the relics were carried out 84,000 times during Asoka's reign only. It does mean, however, that the enshrinement ceremonies were performed in quite a number of cases during Asoka's time. People must have been witnessed them frequently in northern India.

The first examples of a Parinirvana scene on the railing of the Bharhut stupa are composed of the same visual keystones as the legend in the MPS, viz. payig homage to the relics displayed in a royal hall and during relic procession. These ceremonies might have been acknowledged as re-enactments of the events that are handed down in the MPS with regard to the cult and enshrinement of the relics of the Buddha. These regularly took place in India from the time of Asoka onwards and could frequently have been witnessed by public and artists.
The well-known sculptural relief on the railing pillar of the eastern entrance to the Bharhut stupa (Coomaraswamy 1956, pl. V, fig. 15) gives a picture of a relic procession on the occasion of the building of the stupa. One royal personage, dressed in princely attire and riding upon a large and impressive elephant, is holding a relic casket which has been placed upon the elephant's forehead. The relic should literally occupy the highest position. He is flanked by two attendants mounted on much smaller elephants and followed by another royal personage carrying a standard crowned by a Suparna. The procession moves forward on a raised pathway which is supported by Yaksas and elephants.

This pathway most probably indicates the raised terrace (medhi) of the stupa under construction, which in Sri Lanka is appropriately called 'elephant-terrace' (hatthiyledi, Paranavitana 1946,18); in some cases this terrace is even decorated with elephants (Paranavitana 1946,18; Silva 1988, 19).

Considering the custom to build a relic chamber on top of the platform (medhi, janghavedika) of a stupa (Paranavitana 1946,19-24; Silva 1988, 27), we may assume that the processional road which is depicted on the relief led to the platform of the stupa of Bharhut when it was in course of construction. The procession stopped here, after which the relic casket was placed in the relic chamber on top of the platform where it was visible for every one attending the ceremony. The relic casket was probably honoured during several days, after which the stupa was closed.

A ceremony like this has been described in Buddhaghosa's Samantapasadika, and again in the Mahavamsa and Thupavamsa in almost the same wording. We are told that the enshrinement ceremony was performed on the occasion of the foundation of the famous Thuparama by king Devanampiyatissa, which supposedly took place in the third century B.C. The account cannot be later than the time of Buddhaghosa, who undoubtedly drew upon earlier records. He certainly did not invent the ceremony. I merely mention the main visual details of this important description and leave all digressions out: "The casket of the bodily relics came down on the head of the king ... He then asked Sumana: "The bodily relics, Sir, have come down on my head; what am I to do now?" The elder replied: "Put them on the top of the elephant." Thereupon the king placed the casket of the bodily relics on the top of the elephant."
"At that time, the great elephant was surrounded by crowds of people dancing and singing and was shown singular honour and respect. The elephant entered the city... got out of the southern gate... and returned to the site of the Thuparama... It stopped intentionally at the basic foundation of the Thuparama... and stood facing the stupa". The relics, however, could not be lowered down, as "it is not allowed to take it down once it has been raised" (Jayawickrama 1962, 201). Mahinda advises the king first "to build a platform equal to the height of the elephant's forehead". The platform was built "Knee-high" (janghappamanam), i.e. to the height of the upper terrace (janghavedika). In the centre of this platform a small stupa was erected. The king offered respect in various ways and he now wished the relics to be lowered down. All the people of the country, with flowers, scents and music, came to see the bodily relics. Thereupon the erection of the stupa was completed (Bapat and Hirakawa 1970, 63-66; Jayawickrama 1962, 75-79; Samantapasadika 89-93).

A few details in this description of the enshrinement ceremony are important to be noticed with a view to interpreting the Bharhut and Sanci reliefs correctly: in the first place the relic procession preceding the enshrinement moves right through the city to the place where the first stupa was to be built. Many people came to attend the festive ceremony. This part of the procedures reflects the 'first' relic procession after the death of he Buddha right through the city of Kusinagara (see above). The king himself holds the relic casket that is placed first on top of his own head and then on the forehead of the royal elephant.

In the second place, the relics are placed on the upper terrace of the stupa under construction "equal to the height of the elephant's forehead", i.e. about three meters in height, which is not an abnormal height of the 'drum' of the ancient stupa (the terrace of the great stupa at Sanci measures 4.50 meter in height). The actual height of this platform was probably determined by the practice of transporting a relic casket on the head of a full sized elephant from the royal stables, and by the custom that a relic casket should not be taken down.

A large crowd no doubt paid homage to the relics enclosed in a relic casket having the form of a small stupa during several days. The relic casket was then enshrined within the dome of the stupa.
The Bharhut relief can only depict such an enshrinement ceremony, which probably existed from about Asoka's time and was regarded as a re-enactment of the Parinirvana rites. The artist does not give any clear reference to the story of the Buddhs's Parinirvana. On the contrary, he only depicts one royal elephant with a relic casket, not seven as the story has it. Moreover, considering the elaborate character of the Parinirvana rites that are described in the MPS, the mere depiction of a relic casket on the head of an elephant, which in the literary account is not even mentioned, is not enough to refer to such a complex cycle of events. In that case, almost the whole story had to be explained in a verbal commentary.

The artist, however, did not illustrate a story but he pictured what he probably had witnessed himself, i.e. the ceremony of the relic procession during the founding of the stupa. Furthermore, the relief has conspicuously been placed right at the main entrance to the processional pathway of the Bharhut stupa.

Similar formulas are used in two other reliefs, which are carved in a quite different position and form part of the iconographic program of the coping stone. Again, one elephant rider is depicted holding a relic casket, and doing his utmost to assume a position which is lower than the relic casket on the elephant's head (Coomaraswamy 1956, pl.XLV, fig.166; Pramod Chandra 1970, pl.XXI). Here too the relic procession is reduced to one elephant-rider only, but it has been incorporated into a long series of ornamental reliefs on the coping stone. This ornamental context influences the intended meaning of the relief. The relic ceremony is transformed here into an auspicious image that causes merit when people are looking at it (punyadassana).

In another coping stone relief (Agrawala 1969, 55, pl. XXII), the number of elephants is increased to four. Four elephant riders holding relic caskets seem to form a procession, which is moreover brightened by a music-party. Again, the relief is depicting a relic procession on the occasion of the founding of stupas rather than illustrating an episode from the life of the Buddha.

The Bharhut railing gives us another example of the cult of the relics. A well-known relief (Coomaraswamy 1956, pl. XII, fig. 32) on the upper panel of the corner pillar belonging to the western entrance which led to the processional pathway pictures a royal hall, a palace and a music party. Inside the hall one sees an
adorned platform covered by a parasol.

The inscription tells us that the hall Sudhamma is meant, which is the royal hall in Indra’s heaven, where the relic of the hairdress of the Buddha is honoured by the Devas. It is significant that the inscription uses the word mahas (bhagavato cudamahā, “the festival of the Buddha’s crest-jewel”) and not a word like puja. The palace is identified by another inscription as the Vejayanta palace of Indra, king of the gods. Coomaraswamy (1956, 50) assumes that people imagined that the relic could be seen on a feast-day that was dedicated to it.

20. The Chinese pilgrim Fa-Hian describes a daily ritual which was celebrated at Hadda and consisted of bringing the relic of the skull-bone out of the temple and placing it outside the vihara on a high platform: "The bone is of yellowish-white colour, four inches across and raised in the middle"... The offerings being all done, they take back the skull-bone. In the vihara there is a final-emancipation tower which opens and shuts, made of the seven precious substances, more than five feet high, to receive it.7

The same pilgrim, as is well-known, makes mention of the festive procession of the tooth in Sri Lanka, which is placed in the hall of the Buddha at Abhayavihara, "where the clergy and laity all assemble in vast crowds and burn incense, and light lamps, and perform every king of religious ceremony, both night and day, without ceasing" (Beal 1884, lxxvi). After ninety days the relic is brought back to the vihara within the city. Similar records are known from the account of Hsuen Tsang. He noted the that at the monastery in Bodh-Gaya the bone - and flesh relics were taken out every year on the day of the full moon for public exhibition. (Beal 1884, 133). The monastery was built by a Sri Lankan king.

The Bharhut artist depicts the display of the relics on a high platform in a royal hall, which is situated right near the palace. The relic is worshipped by two adorants making the appropriate gestures. A festival is going on, including a dance and musical performance.

The same ceremony has influenced that part of the MPS where the display of the relics in the palace of Kusinagara is described. Literary and pictorial tradition are reflecting a ceremonial practice which remained very much alive throughout the
history of Buddhism, up to the present day in the temple of the Tooth in Sri Lanka.

The third formula used in Bharhut in connection with the worship of the relics is, of course, the homage to the stupa (Coomaraswamy 1956, pl. XXIV, fig. 64 and pl. XXV, fig. 65). It is sufficient to mention here, that the artist again is depicting what he could see with his own eyes: a ceremony, or a festival at the stupa. The relief is a representation of the continuous re-enactment of the worship of the stupa as the final episode of the enshrinement ceremonies. He did not mean to reproduce an episode from the Buddha's life by using an aniconic formula.

The reliefs of the Bharhut railing thus inform us about Buddhist practices in the 2nd century B.C. The visual material, when treated as independent evidence, points to three sorts of ceremonies which are connected with the cult of the relics: (1). the relic procession, (2). the relic exposal in a hall and (3). the relic enshrinement in a stupa.

Moreover, the artists seem to have been guided by contemporary ceremonies and not by literary texts. As with ceremonies, their works of art were looked at in order to gain merit (punyadassana) and far less in order to be informed about a 'historical' scene in the life of the Buddha.

In the next century, in centres like Sanci and Amaravati, the artists continue to represent ceremonies that were regularly performed with respect to the relics, such as the cult of the stupa, or the display of a relic casket in a pillared hall, or the relic procession.

One relief (Marshall-Foucher 1982, pl. 36 c 1) gives a beautiful picture of a festival (mahas) at a stupa. Ebert (1985, 31) rightly asks whether this festival would not represent the annual ceremony in honour of the Parinirvana of the Buddha rather than the Parinirvana episode itself.

In Jagayyapeta, a catching example is found of an early relief illustrating a round pillared hall (Franz 1965, fig. 69). There is a platform inside upon which a relic casket is shown.
A relic procession is pictured on an architrave of the west gate of stupa I at Sanci (Marshall-Fouche 1982, pl. 61, 1), moving towards a city, the relic being carried upon the head of a royal personage mounted on the first elephant. The relief probably pictures the festive entry of the relics into the city of Vidisa before its enshrinement in the stupa. This solemn entry was performed as a re-enactment of the entry of the Buddha’s relics into the city of Kusinagara, according to the MPS (see above).8

From the beginning of the Christian Era, a new interest in the life of the Buddha resulted into compositions of a complete life-story, both in literature and in art. The first painted representation of a full biography, divided over eight episodes, was identified by Schlingloff (1987,1-13) in Cave nr. 10 at Ajanta, dated to the first century A.D. The division of the relics and the following procession now refer to the Parinirvana episode, as the concluding scene of a series of eight episodes forming a complete life of a Buddha. A cycle of Parinirvana episodes was discovered at early Amaravati 9. A relic procession is represented on the bottom architrave of the back of the southern gateway of the great Sanci stupa (Marshall-Fouche 1982, pl. 15, 3; 16,3; 17,3), with clear references to the war of the relics.

It can be assumed that in the first centuries round the Christian Era, significantly at the same time when the image of the Buddha was introduced, episodes from the life of the Buddha gradually became more important (Lamotte 1976,723-726). This certainly does not mean that ceremonies were not depicted any more. In Mathura (Sharma 1979,19 and pl. xxxvii, fig. 2),and in early Gandhara (Fussman 1980, 54 and pl. VI) the relic of the crest- jewel is pictured lying on a platform and worshipped, without a clear reference to Indra’s heaven. Gandharan art seemed to have been particularly fond of the relic of the begging-bowl of the Buddha, which was supposed to ‘reside’ in this area.10 It is mostly depicted placed upon a platform and covered by a canopy.

All this evidence shows that relics were displayed in India from the very beginning of Buddhism as a religion, at least from the end of the fourth century B.C. onwards. Our analysis of the early Bharhut reliefs brought about some new information about relic processions on the occasion of the construction of a new stupa, and about the display of the relics on a platform in a temple hall. Moreover, Buddhist lay ceremonies rather than literary accounts may have served as models.
for artists working in the early Buddhist period. Pictorial art appeared to be very informative in its own right and shows us evidence about an aspect of Buddhism that is generally left out in early Indian literary sources.
1. I am grateful to Prof. Dr. R. Kloppeborg who drew my attention this publication.

2. Nowadays Buddhist devotees still present gifts to the sangha after pratimoksa and hang them on a tree representing the Sangha. I thank Drs. M. J. van der Heijden for this information.


4. Inscriptions on relic caskets from the Gandharan area, which were recently examined by Fussman (1986, 1-1), show that great merit was earned by enshrining relics in a stupa where never before a stupa had been erected, i.e. in new territory.

5. I am thankful to Prof. Dr. Gustav Roth, who mentioned this inscription to me a few years ago when we talked about the subject of the exposal of the relics.

6. The use of the singular galiya can be explained, when all the relics were exposed before Asoka distributed them over a large number of stupas. They thus represented the complete body of the Buddha.

7. See Beal 1884, xxxiv. The ‘final-emancipation tower’ is a form of a stupa which apparently can be opened and shut. Compare the Japanese shari-to temples.

8. Another relief at Sanchi on the back of the middle architrave of the western gateway is probably not a relic procession, for the reason that no relics or relic casket can be seen (Marshall-Foucher 1982, pl. 61, 2).

9. See Sivaramamurti 1956, pl. xiv, fig. 2 and pl. xliii, fig. 1 and 2 A complete Parinirvana cycle was discovered on a relief from Amaravati (Ghosh 1964-65 168-177).

10. See the remarks made by Fa-Hian (Beal 1884, lviii).
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SRI LANKA IN VORTEX OF CULTURAL CROSS CURRENTS
A brief analysis of cultural phenomena in south and southeast Asia from pre-historic times up to early historical times

By
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The history of Indian Ocean cultures goes back to several thousands of years before the present era, that is many centuries or rather millennia before the beginning of the Christian era. It is only through archaeological finds that one can possibly depict a picture of this earliest phase of cultural background of Indian Ocean communities. Our own investigations have enabled us to postulate that even during the pre-Christian centuries the Indian Ocean communities have made it possible to share their cultural activities both by offering their experiences to others and also by absorbing from others, the cultures of one another.

The pattern of cultural growth in places of occupation by early man in the littoral of the Indian Ocean is an index to the contention that although they lacked advanced technological knowledge in regard to easy and quick communication, yet they were able to spread their culture in a wider area in the Indian Ocean region than what we might think they would have achieved in such an early date. The earliest cultural phase could be taken as the megalithic age which developed into the bronze age and subsequently the iron age by the time of the dawn of the Christian era.

Cultural objects of the megalithic period are widespread in the major occupation areas of the Indian Ocean region. Thus the Indian mainland, the Islands (e.g. Sri Lanka, Indonesian archipelago, the Malaysian peninsular, the Maldives) the Southeast Asian mainland (comprising Burma, Thailand, Cambodia and Laos, Vietnam can also be included as a peripheral region) have yielded enough evidence of a material culture of a megalithic period. These remains comprise megalithic burials, chert and quartz implements and tools, pottery utensils and objects used as ex-voto items, megalithic buildings of significant dimensions. Several South and Southeast Asian sites have yielded a significant number of cultural objects of this period and of subsequent phases.

The cultural dispersion of the period is traceable throughout the Indian Ocean
littoral occupation sites such as Arikamedu and Pondicheri in South India, the Indus valley sites, Maldives atolls, Mantai, Pomparippu and several other sites in Sri Lanka and many pre-historic sites in Southeast Asian mainland about which many learned papers have been published by scholars who have worked on the discipline.

The terracotta figurines of this period discovered at almost all the sites referred to above show a marked similarity. These clay votive objects could have served a religious or a cultic purpose for the inhabitants of the region under review. The vast area covered by the dispersion only speaks of the widespread nature of the cults and beliefs.

The problem of the archaeologist and the historian is more to explain how the dispersion took place (as well as how the similarities occurred) than to provide an account of the presence of these cults at various places in the region at the same period of time. Although the time was in the pre-historic period yet one can not fail to note that there was a brisk traffic of cultural knowledge and experience even in this period of remote past. There could have been both cross-oceanic or cross country (overland) passage for the spread of this cultural phenomenon (in the form of beliefs and practices). It is not difficult to imagine the land routes for the cultural traffic during these distant times. However it is beyond imagination to think of such traffic across the vast expanse of the Indian Ocean. It is difficult to imagine that out-trigger canoe or the reed-craft could have provided the long distant journeys across the vast expansion of the Indian Ocean although some scholars like Thor Herdayal of Kontiki fame (the Norwegian explorer try) to prove the possibility of oceanic journeys by such feeble crafts during the period under review. Anyway further research is needed on this matter before we should arrive at conclusions.

But the fact remains that the majority of the Indian Ocean people shared a common cultural heritage even in the remote past the period we designate as the pre-historic times.

I wish to enumerate a few such instances in the following analysis where similarities are more striking:

- The ethnic types giving certain clues to a common origin. Veddas of Sri Lanka, Munda, Bhill and other nomadic and hill tribes in India, the primitive tribes in Lakadives, Malaysian and Indonesian jungle tribes and especially the aborigines
of Australia. The Dipavamsa and the Mahavamsa, the early chronicles of Sri Lanka, refer to the expatriation of pre-historic Yakkhas of Sri Lanka, a tribe which denizenized in Sri Lanka in pre-Buddhist period. Could this not be a counter euhemerism of a pre-historic incident whereby strong and culturally advanced invaders from outside, arriving in Sri Lanka, to push out the less advanced local inhabitants. The Vedhas of Sri Lanka are supposed to be the survivors of primitive and pre-historic tribes. The similarity between the cults, practices and especially ethnic and racial types of Vedha and Australian aborigines are especially matters worth re-examining in the light of the above context.

* Some valuable clues to the cultural correlations of the Indian Ocean region communities in the pre-historic period and early historic period could be made available through an analysis of linguistic formations, ethnic types and cults and beliefs that have woven into the religion of the early man of the region. The survival of these characteristics are easily discernible among the less civilized tribal people referred to above. Such a task is unimaginable to be undertaken by a single person because it involves the exercise of several disciplines such as anthropology, archaeology, art-history, history, sociology, linguistics, religion and philosophy to quote only a few.

I may suggest a few possible avenues for future research (however as a layman of some of the above mentioned disciplines) so that a multi-disciplinary combined effort, or to say it in a different manner, to put together many heads for the task, we might be able to arrive at possible hypothesis for future research towards revealing some aspects of the cultural background of the early Indian Ocean region communities. Such a revelation might be of need for future scholars who will be working towards understanding the dynamics of homogeneous and heterogeneous cultural growths among the Indian Ocean region communities.

* Through an anthropological investigation one may be able to explain the dispersion of homogenous ethnic types in the formation of Indian Ocean region communities. The presence of the Mediterranean mixed and proto-Austrolioid and Negrito (Malayo-Polynesian) ethnic types in the entire Indian Ocean region (E.g. Ethiopean tribes, Sri Lankan Vedhas, Mundas, Lakadive hill tribes, the Malaysian and Indonesian hunting tribes, the Australian aborigines). The arrival and dispersion of Indo-European (Aryan) ethnic types who have overpowered the early
proto-historic denizens of the lands of the Indian Ocean also could be investigated and explained in the same light.

* In the sphere of religious beliefs, cults and observances also, there is much that still lies unexplored or partially explored. The religion of the early man before the influx of the Aryan colonisations among Indian Ocean region communities could be understood better through the process of investigating the pre-Buddhist and pre-Biblical (by which term I mean, pre-New Testament) religion of the communities. The belief in a God All-Mighty, the Creator, Preserver and the destroyer could have been the prevalent common religion of the early man of the Indian Ocean region communities.

* The cult of ‘Yehowah’ of the Judaic religion could be compared with the cult of ‘Yakkha’ (also pronounced as Yaksa) a strong religious belief that was prevailing in India and Sri Lanka especially and also in South and Southeast Asian countries, before the advent of Buddhism. Let me suggest that there is quite good reason to believe that there was a common religious belief in the vast expanse of the Indian Ocean region occupation area and this common religious belief is manifest through the so far little exposed and scantily explored, but prominent remains of archaeological objects that have been discovered and have been assigned to the pre-historic period. The terra-cotta exvoto objects of very identical type have been discovered in places quite apart from each other (e.g. Sri Lanka, Mohenjodaro, Middle Indian sites, Jericho, Aegean and Cretan sites, Southeast Asian sites, etc.).

* The Polytheism of Judaic and other Biblical (West Asian) communities, the gradual formation of their ethical and moral codes and the subsequent development of the Monotheistic beliefs of a ‘creator’, Preserver and Destroyer ‘God All-Mighty’ are not concepts and beliefs uncommon to other pre-historic communities of the Indian Ocean region. In the so far unexamined survivals of the little known ‘Yakkha Religion’ of South Asia as found in some tracts of the Buddhist canon (the Tripitaka) and some semi-historical writings of Sri Lanka and other South Asian countries, there are references to the lost religion of the ‘Yakkha Cult’ whose followers were also known as Yakkhas. A comparative analysis of the Yakkha beliefs, cults and practices with those of the Judaic and Cananite religions proves the fact that Yakkha religion has much similarities with the Semitic religions of the Jewish (Israelite) and Cananite origin. The juristic tendencies of these pre-historic
religions (i.e. one that requires the fulfilment of a Code based on work, practical
ethics and morality rather than belief- a law of righteousness according to which man
should live. The emphasis on the sacrifices and the sacrificial objects, the decalogue
(ten commandments), the worship of the cultic Godhead (Yahweh, Baal of West
Asia and Yakkha and Bali of South Asia) through the symbol of a brazen Seraph (of
Judaic religion, cf. Sarpa) and the serpent cult the Naga cult of pre-Buddhist
communities in South Asia (India and Sri Lanka) and Southeast Asia.4

* The household gods, family gods and tribal gods who are manifestations of
the primary Godhead- of the West Asiatic Biblical religionists of pre-Christian
origin and the Gramadevatas, Kuladevatas,(the village deities and the household or
family deities of South Asian primitive religion) who are also representatives of a
larger pantheon under the control of a primary Godhead - the Maha Yakka who in
all probability could be a deified cosmic power manifested in the sun (the Solar deity.
 cf. the later Mahayana Buddhist concept of Mahavairocana Buddha, the
Cosmocrator.)

* The shrines dedicated to the pantheon of minor deities and their priesthood
who performed the sacrificial ceremonies (condemned both by the Buddha and the
Jesus Christ). In Buddhist texts and Sri Lankan chronicals these shrines are referred
to as Cetiyas - Yakkha Cetiyas - which have been destroyed by the people once they
accepted the new religion of the Buddha.5

The Mosaic phase of Judaic religion developed a dislike towards iconolatry.
This tendency is found even in early Theravada Buddhism and firmly followed by
Islam.

* An investigation of the religion or religions of the pre-historic Indian Ocean
region communities is a matter that has not been thoroughly undertaken by anyone
up to date. The obsession of many scholars that it was the Indo-European (Aryan)
religion as found in the Rigveda that was primarily responsible in the formation of
religious beliefs and practices of the Indian Ocean region communities could not be
considered a factor that holds much validity on the above analysis. Even the
Indo-Aryans have been influenced by the more popular religion (or religious cults).
of the Indian Ocean region communities. The fourth Veda known as Atharvan Veda
is a clear index to this. Even the religion of the Sakyas, the clan to which the Buddha

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was born, was supposedly a type of Yakkha religion. The patron deity of the Sakyas
was a Yakkha known as ‘Sakya Vardhana’ at whose shrine the new born baby Buddha
was offered in the same manner babies were offered to redeem vows (bara) even in
the present day at village shrines of deities (Grampa devatas) by devotees among rural
folk in Sri Lanka and many other South Asian countries. Therefore for a better
understanding of the origins of the cultures of the Indian Ocean region communities,
one has to get rid of such obsessions or delusions as the Aryan predominance or the
Vedic pre-eminence in the Indian Ocean region cultural theatre. A new approach
to understand the broader perspectives of the culture of early man in the entire
theatre- the Indian Ocean and its periphery- the West Asia, Southeast Asia and
Australasia (including the Pacific islands as the eastern most frontier of this cultural
dispersion)- has to be undertaken with clearness of mind and without pre-conceived
notions, obsessions and prejudices.

* The linguistic formations and evolutions of the early man of the Indian Ocean
region could only be reconstructed through survivals of tribal languages. A
comparison of the Veddha and Australian Aborigine words is vital in this regard as
it could yield very promising and exiting results (Mikatra, vaga vaga, Koomari, to
cite a few Australian aborigine words at random).

Domestic utensils and weapons used by the present day survivors of
proto-historic man of the region can also provide valuable results towards the
reconstruction of the cultural fabric of the Indian Ocean region communities (e.g.
the piece of wood used by the primitive man; the Veddha club and the Aborigine
boomerang; the mythical Cakrayudha - the discoid weapon once hurled at a target
(enemy) could hit it and return to the thrower; cf. Sinhalese Bamara and
Boomerang).

The above analysis throws at least some light on the similarities of cultural
traits, affinities in religious beliefs and practices, parallelism in the objects and
artefacts of cultural value, that the man in Indian Ocean region possessed.

But to explain how such parallelisms, similarities and affinities took place is
not an easy task unless we can show definite proofs of cultural impacts. It is on this
matter that various conjectures, suppositions, and plausibilities have been suggested
by scholars. Knowledge pertaining to the methods of early transport by man in the
region is a primary factor that one has to solve in this respect. We have referred to above the theory suggested by the Norwegian explorer cum archaeologist Thor Hardayal on early cross-oceanic navigation when man was still using primitive tools. (For primitive types of boat building that have survived even up to modern times, see, Jeffrey Millefoot, Australian National Maritime Museum, The Indian Ocean Review, ed. K. Mcpherson, Perth, Vol.1, no. 4, for 1988, pp. 22f.). Communication through land routes is the other process by which the cultural contacts were maintained. The primary question of what was the provocation of the early man to achieve this is also a matter worth considering. Was it war, conquest, acquisition of new pastures, natural calamities or escape from annihilation of one's kind (the problem faced by the Jews of Mosiac times and the Sakyas of the Buddha's day and the Yakkhas of pre-historic Sri Lanka), or the mere thrill of exploration that brought people of diverse cultures to meet one another; to mix and share; to accommodate and absorb; to give and reciprocate. All these factors have to be analysed and investigated in a study aimed towards understanding the broader perspectives of the culture of Indian Ocean region communities, which poses a challenge to any scholar.

Our knowledge of the pre-historic and proto-historic layers (strata) of the culture of Indian Ocean communities is still vague. Therefore we are still dependant for this knowledge on a few attempts to investigate, at random, and also at particular select cultural sites.

The great antiquity of the early beginnings and the evolution of the people of Pacific Islands is also a matter worth reckoning in a study of Indian Ocean region cultural communities, because it has now been established by scholars that these island people who comprise Melanesian, Polynesian, and Micronesian ethnic types have originated as migratory groups from south and southeast Asia via Indonesia and Papua New Guinea, at a period between 3000 to 6000 years ago. Therefore in this migratory process the Indian Ocean region cultures could also have played a significant role. These are however wider aspects of the study of Indian Ocean region cultural communities, hence could be overlooked. But in a overall study which we advocate for the cultural theatre of the Indian Ocean, none of these perspectives could be lightly taken or sharrowly treated, let alone ignored. The above line of thought as well as the facts pertaining to a possible inter-relationship of pre-historic cultures of the Indian Ocean region communities as proposed by us, have to be further investigated before conclusions are arrived at. The customs, habbits,
beliefs, cults and practices of these communities in the vast region of the Indian Ocean could not have begun all of a sudden with the dawn of the historical period. These could not have developed in isolation either because their similarities and affinities are too striking than otherwise. Therefore it is reasonable to postulate a common substratum for the culture of the Indian Ocean region communities and a prevalence of an awareness of each others' cultures, by these communities from the earliest times.

Our thesis however incomplete as it seems, is aimed at throwing more light on this aspect of study. We expect that further investigations on these lines will provide the future scholars as well as the students a better opportunity to understand the broader perspectives of Indian Ocean region cultural formations during the subsequent period in the centuries after the Christian era.
NOTES


3. A.A. Macdonell, Lectures on comparative religions, Calcutta, 1925, pp. 119 ff; See also, Encyclopedia of Religion and Ethics (ERE), Vol. 6, pp. 254, see further ERE (op. cit), Vol. 2, p. 290.


6. See the article, ‘South Pacific’ in Australian Foreign Affairs Record, Vol. 54, no. 8, August 1983, pp. 379-402.
A TALE OF TWO SEALS

By
Gregory L. Possehl
and
M. H. Raval

INTRODUCTION

Two strikingly similar bead/seals have been found in Bronze Age sites that are a part of the greater tradition of the Indus Civilization (Figure 1). Both are flat, "wing-shaped" objects, with geometric designs caved or molded onto their surface. The first of these (Figure 2) is unpublished and comes from the 1962-63 field season at Rojdi (IAR 1962 - 63 : 8). It is presently with the Gujarat State Department of Archaeology in Ahmedabad. The second of these bead/seals (Figure 3, Anonymous 1988 : 100, Pl. 81) was found at Mehrgarh on the Kachi Plain on the western edge of the Indus Valley, at the foot of the Bolan Pass. While these bead/seals come from different cultural and chronological contexts, the comparative parallel would seem to be a sound one.
Distribution of Urban Harappan Phase (2550–1900 BC) and Related Sites
Figure 2, The Rojdi bead/seal

Figure 3, The Mehrgarh bead/seal
THE ROJDI BEAD/SEAL

The Rojdi seal is made of blue-green faience and is broken. It is labeled and comes from Period I, Sub-phase B, designated by M.A. Dhaky. The published account of this work is short and can be quoted here.

Period I provided a sequence of two Phases: (Earliest) Phase A was purely Harappan, while Phase B showed links with Prabhas.

In Phase A a mud-platform was found to support a succession of seven lime-floorings, alternated with mud-ramming, the lower three of which showed signs of intense burning. The ceramics comprised red, buff, coarse-corrugated, reserved slipped and micaceous pink wares. Associated finds include microlithic blades of jasper and chalcedony and beads of shell, carnelian, steatite and faience.

Sub-phase B reflected the material prosperity and expansion of the settlement. Ceramics of the preceding sub-phase, such as buff, coarse-corrugated and micaceous pink ware continued. A few dishes in the typical Indus forms with scarlet slip recalled the Lustrous Red Ware. A fragment of the Prabhas Ware and two sherds of cream slipped ware with paintings in black and brown are worth mentioning. Two carbon-14 dates from this Sub-phase give a range of 1970 + 115 and 1745 + 105 B.C. (TF-200 and 199 respectively, calculated at 5730 as half-life value).

More recent excavation at Rojdi has sustained this periodization (Possehl and Raval 1989) with our Rojdi B dating to 2300 - 2000 B.C. based on calibrated dates (Klein, et. al. in press).
### TABLE 1
Radiocarbon Dates for Rojdi A & B

<table>
<thead>
<tr>
<th>Half-life</th>
<th>Half-life</th>
<th>Calibrated Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5568</td>
<td>5730</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRL -1282</td>
<td>3470±140 B.P.</td>
<td>1620 B.C.</td>
</tr>
<tr>
<td>PRL -1281</td>
<td>3520±110 B.P.</td>
<td>1680 B.C.</td>
</tr>
<tr>
<td>PRL -1088</td>
<td>3770±125 B.P.</td>
<td>1930 B.C.</td>
</tr>
<tr>
<td>PRL -1083</td>
<td>3875±125 B.P.</td>
<td>2040 B.C.</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRL -1285</td>
<td>3740±140 B.P.</td>
<td>1900 B.C.</td>
</tr>
<tr>
<td>PRL -1284</td>
<td>3810±100 B.P.</td>
<td>1980 B.C.</td>
</tr>
<tr>
<td>PRL -1089</td>
<td>3865±115 B.P.</td>
<td>2030 B.C.</td>
</tr>
<tr>
<td>PRL -1093</td>
<td>3920±105 B.P.</td>
<td>2090 B.C.</td>
</tr>
<tr>
<td>PRL -1283</td>
<td>3980±100 B.P.</td>
<td>2140 B.C.</td>
</tr>
<tr>
<td>PRL -1087</td>
<td>4010±105 B.P.</td>
<td>2180 B.C.</td>
</tr>
<tr>
<td>PRL -1085</td>
<td>4020±105 B.P.</td>
<td>2190 B.C.</td>
</tr>
</tbody>
</table>

These new dates from Rojdi are not significantly different from two other dates gathered as a part of the 1962/63 season of work at the site (Table 2).
### TABLE 2
Radiocarbon Dates From Rojdi IB

<table>
<thead>
<tr>
<th></th>
<th>Half-life</th>
<th>Calibrated Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF-200</td>
<td>3810±110 B.P.</td>
<td>2415-2135 B.C.</td>
</tr>
<tr>
<td>TF-199</td>
<td>3590±110 B.P.</td>
<td>2160-1850 B.C.</td>
</tr>
</tbody>
</table>

If these dates are averaged using the computer program CALIB from the Quaternary Isotope Laboratory at the University of Washington the chronology for Rojdi is as follows:

- Rojdi B: 2139-1983 B.C.
- Rojdi A: 2471-2367 B.C.
THE MEHRGARH BEAD/SEAL

The Mehrgarh bead/seal is grey terra-cotta and is perforated. It has been dated to Period VII at the site which is estimated at ca. 2800 B.C. It thus just precedes the beginnings of the Mature, Urban Phase of the Harappan Civilization. The catalogue entry indicates that there is a second, smaller, unillustrated, example of this type which is "...tout a fait exceptionelle au Baluchistan et dans la vallee de 1 ' Indus". (Anonymous 1989: 100). The example from Rojdi changes this, of course.

CONCLUDING REMARKS

This bead/seal type has a remarkable low level of occurrence for a type that seems to have a history of something approaching a millennium. We do not propose to readjust the radiocarbon chronology for either Rojdi or Mehrgarh based on the occurrence of such an object, but it is often small, relatively obscure things that can at times open doors, or admit new ideas about the cultural dynamics of a region like the Greater Indus Valley. This is justification enough for presenting this parallel.
BIBLIOGRAPHY


A TECHNIQUE OF POLYESTER RESIN CASTING OF ARCHAEOLOGICAL OBJECTS USING FLEXIBLE MOULDS OF VULCANISED RUBBER LATEX.

By
H. R. Premaratne

Glass fibre reinforced Polyester Resin is a comparatively new structural material and its use in sculpture is still more recent.

The first time I saw this being used for Architectural casts was for a stage set for the film Cleopatra. Already the set had been made of Plaster-of-Paris and assembled in a site in Hollywood, when the authorities decided to film it in Italy. As the original set made in Plaster-of-Paris could not be transported, they decided to make the whole structure out of the reinforced polyester resin process.

Being the massive job that it was, the whole process was mechanised at the time I saw it. Later, I had occasion to see the work done manually, and even to work with this material at another studio. The moulds were made of a synthetic rubber by the trade name of "Vinamold".

In the early 40s, I had made some small flexible moulds of parts of stone sculptures, dolls, etc. using jelly moulds. The jelly was stiffened by reinforcing it with cotton and a filler of powdered brick, a process claimed to have been developed by Mr. Duncan de Alwis, then working at the Colombo Medical Research Institute (M.R.I) as its modeller. Casts were made in Plaster-of-Paris or wax. This was an interesting - but expensive - hobby. Some good casts were obtained from the process, most of which were given away as presents.

As construction Engineer - Colombo, it became my responsibility in late '47 to convert an old Royal Air force (RAF) hanger at Torrington Square into an Assembly Hall capable of accommodating not only the Houses of Parliament but also a large gathering of local and foreign dignitaries and the general public for the Declaration of the Independence of Ceylon now Sri Lanka by H.R.H. the Duke of Gloucester in February 1948.
I had visions of a grand Durbar Hall fit for the occasion, with a raised platform of the Anuradhapura period, with ornate steps flanked by guardstones, with ‘Makara’ (dragon) balustrades and ‘Punkalas’ as the central theme.

For this purpose I decided to get casts of authentic guardstones using the jelly mould method. I made two flexible moulds of the guardstones at Thuparama. This, I believe, was the largest job of its kind attempted to date. From these moulds, I made three pairs of plaster casts and one of wax. So far flexible moulds I used were of jelly, and though the possibility of making latex moulds had flashed across my mind, there was no opportunity or need to pursue this further.

Whilst working on the sets for the stage play ‘Siri Sangabo’, I had occasion to use rubber latex for making ornaments. These were made in plaster moulds and heat treated to vulcanize.

In the late sixties, I was invited by the then Director of Cultural Affairs to make a set of casts of Archaeological objects to be sent for an exhibition in Washington D C, U.S.A. Time allowed as usual was very limited. All moulds had of necessity to be flexible.

I had used ‘Vinamold’, before, and even had a small quantity with me, but it was a hot application and unsuited for the purpose. A more suitable material also imported was ‘Cold-Cure Silastomer’ which could be applied on the object and the mould built up by laying strips of gauze impregnated with the liquid. But this had to be imported at high cost and large quantities were required. Besides, unless the material was airlifted, the time factor which was our constraint would have vitiated the whole exercise.

Faced with this predicament, I thought of using rubber latex and vulcanizing it on the job. I discussed the matter with some officers of the Ceylon Institute of Scientific and Industrial Research (CISIR), and also consulted a friend of mine who was a Senior Officer in the Rubber Research Section of Richard Pieris and Company of Colombo. He prepared a latex compound which had to be heat-treated to vulcanize. I bought a quantity of this and made some trial moulds.
The latex could not be used in its liquid form, so I first tried impregnating pieces of cotton gauze and pasting on the object. I found this tedious and unsatisfactory, the main defect being the difficulty of getting rid of the entrapped air.

I thought of an additive to make the latex into a paste. I had to abandon the idea of using cotton flock as again the cost would have been prohibitive. The nearest approach to it was to use chopped cotton waste (not to be confused with the now prevalent waste from tailoring establishments). The cotton waste chopped into about 1/4" lengths, made fluffy and mixed well with latex compound made a very satisfactory paste.

This mix I used for my very first flexible mould of rubber latex. The first mould was taken off a wax cast of the Thuparama guardstone I had with me from 1947. The guardstone placed on a low table was given a few coats of latex compound - three should suffice. The first coat was applied taking care to prevent the formation of air bubbles on the surface. When this coat was dry, I applied the second coat again carefully and not too vigoursly, as not to disturb the lower coats.

When this coat was also dry, a third coat was applied and whilst wet, I laid the latex cotton waste mix covering the whole figure. This was done systematically beginning from one end. The paste was laid thinly and a sufficient number of coats were put on to give the required thickness.

Then I heated the whole mould using heater bulbs for a about a day and half. This was not a convenient process. This could not be done in the field.

All this while I was urging my friend for a compound which needed little or no external heating. Whithin a couple of weeks he came out with a self vulcanizing, or what he termed "prevulcanized" compound. This proved to be a great boon. In the field it has not to be heat treated. Sun and air is all that it needed. This is what is being used to this day. Richard Pieris & Company and one or two other firms make this to order.

Another major breakthrough was when we started replacing chopped cotton waste with Kapok fluff. Half way through the project I had undertaken, whilst taking
moulds at Anuradhapura, we ran short of cotton waste for just a small section of a mould and were searching for something. We came across a torn pillow with kapok spilling over. I used this to supplement the shortage by mixing it with chopped cotton waste. Thereafter there was no chopping of cotton waste. Kapok is now the standard filler.

MAKING A FLEXIBLE MOULD

Two principal ingredients for making flexible moulds are

(a) Self vulcanizing latex compound and,
(b) Loose and fluffy Kapok.

Also required are parting agents to facilitate stripping off of the mould. Parting agent should not be harmful to the object. Waxes, light oils and even soaps and patent products are available. Soft waxes lightly applied is largely used.

The "master" from which the mould is to be taken is now well cleaned free of dirt and dust. On an exposed outdoor sculpture, I use the latex compound itself to free the object of dust. I apply a coat or two of latex compound and when dry peel it off the object. All the loose dust and dirt will come off with the peeled rubber leaving a clean surface to work on. (Don’t keep this application to dry to brittle hardness in which case it may not peel off).

Moulds can broadly be divided into two categories for our purpose. They are:

(a) One piece mould generally used for making a mould of an object like a plaque or a panel in relief or even a guardstone.
(b) Two piece moulds for taking casts of objects in the round such as a head or statue or a three dimensional object.

In making a two piece mould, the line of separation of the two parts of the mould must be decided on first. Along the line a barrier is built, preferably of plasticine. This barrier should be flat and smooth on the front face, that is the section on which the mould is to be taken first. It may be about two and half inches high. On
the flat surface of the plasticine barrier make indentations which will reproduce as raised toggles on that half of the mould for subsequent registration of the two halves (see the sketch).

Having prepared the "master" the mould of the object to be cast in this manner apply a parting agent on the appropriate face of the object. Then take some of the latex compound into a container and apply on the surface carefully to cover all the area including the flat surface of the barrier with its indentations. Take precautions to avoid air bubbles. When the coat is dry, apply a second coat, and if necessary a third coat, taking precautions to avoid air bubbles. Each coat should be only sufficiently dry to permit the next coat to adhere to the former to form a homogenous coat.

If individual coats are allowed to dry too much, there can be a plane of separation adversely affecting the mould. Also brushing the latex should not be vigorous for it might disturb the coat underneath and dislodge it from the "master".

Once the two (or three) coats are complete and sufficiently dry, apply another coat and whilst it is still wet, apply the rubber kapok mix in thin layers. This can be done by hand or by a spatula. (I prefer the hand method as a much denser and a compact mould can be obtained this way.)

For preparing the latex kapok mix, get some compound in to a container, preferably a plastic bowl and add loose and fluffy kapok and mix, again preferably by hand, until a sufficiently thick mix is obtained, not too dry nor too wet. The kapok of course must be thoroughly impregnated with the latex compound. The mix should not be so wet that latex will drain and collect in pools and result in a poor mould which will dry unevenly and contract and deform. (Note that latex moulds contract on drying the longer it is kept. Therefore I make all the casts required as early as possible as soon as the mould is stripped from the "master". This ensures a true cast).

Generally about three or four coats of the paste will be sufficient to build up the mould to a reasonable thickness. Each layer should be allowed to dry sufficiently but not too much before the next layer is added. They must be thin layers and each layer must be painted over with latex compound to ensure that the layers adhere one to the other. This is important for otherwise the layers have a tendency to
separate when the mould is stripped. When a sufficient thickness is built up the surface is smoothened and two or three coats of latex compound applied to make the surface even.

When the first half of the mould is dry and well set, remove carefully the plasticine barrier taking care not to loosen the rubber round the edges. Then clean and remove any plasticine adhering to the "master", apply the parting agent to the second half of the object, not forgetting to apply the parting agent on the projecting rubber lug with its toggles. Now repeat the process carried out on the first half. Apply two or three coats of latex compound as before covering the exposed area including the rubber lug formed round the parting line. Then lay the rubber kapok mix as before and build it in layers to the required thickness, say half to three quarters of an inch or more according to the size of the object. Having completed the mould thus it should yet not be removed from the "master". A casing built over and around the rubber mould is essential and this has to be done whilst the rubber mould is covering the "master". This is required to support the flexible mould when it is stripped off the "master" and to keep the mould in position.

One Piece Mould A guardstone is best done in a one piece mould with appropriate modifications as necessary. The process is as before to clean the guardstones free of dust and dirt, then apply aprting agent and proceed as before. Some guardstone have plain frames and sides whilst others have ornamental frames and sides with figures carved on them. These can be taken as two piece moulds, but I have always taken them as one piece moulds by making a slight modification in the process. I provide a partial separation on the top of the guardstone mould from back to front. This provided for two flaps and enabled the sides to be released by opening the flaps. In not so ornate and shallow guardstones I simply made the flaps by slitting open with a sharp knife, and carefully joining the two, when necessary, stitching them together for casting. The back of the guardstone is generally dressed smooth. If there were any special features I would take a separate mould of it, but mostly they were plain and a suitable backplate was made from a flat rock cut impression.

As stated earlier, after completing the rubber mould it should be kept undisturbed for some time with the "master" for it to dry. The tendency for the rubber to contract quickly is great if the mould is stripped too early.
When the rubber is well set, in the object the case is made. In all my earlier works I made the cases in plaster of paris. Later I found that the reinforced polyester resin cases were more practicable and easier to handle. In a simple flat mould making a plaster case was a straight forward operation - make a fence round the object with planks, cardboard, or an suitable material, and if the edges were uneven with plasticine or clay and pour the plaster of paris over the "master" taking care to see that the whole "master" is fully covered and free of entrapped air. On vertical faces this was difficult and I made a thick mixture of plaster and laid it by hand. Moulds were made firm and strengthened by suitable shapes made of scantlings and reepers which were then placed on the mould before the plaster was applied to form a composite mould. It is to be noted that plaster of paris too should be reinforced with hessian scrim or suitable material. Cases for two piece moulds too should have toggles or some means for correct registration of the two halves. When the cases are complete and firmly set they can be separated and the mould stripped from the master. Each case with its mould should now be carefully stored to prevent warping. It is advisable to keep the two parts of the moulds in their cases separately. If they are joined then the space inside should be packed compactly to prevent the flexible mould from sagging and deforming.

The largest casing I have done in plaster of paris is for the moonstone at Anur-adhapura and the most complicated one was for the Man and Horse sculpture, (both one piece moulds) also at Isurumuniya at Anuradhapura. Now of course I make casings in reinforced polyester resin. Cases have to be sufficiently rigid to prevent distortion. In this work orderliness and cleanliness are important. Don’t forget to clean the "master" carefully and thoroughly, washing in clean water, where necessary even in distilled water, and tidying the surroundings.

Having completed the moulds, we have to set about making the cast. We are dealing here in making casts in glass fibre reinforced polyester resin.

A word about the material is required. Principally, the materials used are:
(a) Glass fibre hopped strand mat and
(b) laminating polyester resin.

Glass fibre reinforcement: Glass drawn into filaments is very different from window glass. The fibre is not brittle, is flexible and has high tensile strength. A
strand of glass fibre perhaps contains as many as 200 extremely fine hairs of glass filament.

Chopped strand mat which we are using consists of multifilament glass fibre chopped into pieces of about 2 inch lengths and randomly distributed and held together with a sizing which dissolves in polyester resin. Besides chopped mat, there are several other basic types such as glass fibre scrim, which is a loose weave cloth, glass fibre tissue or surface mat, glass fibre ribbon, etc., used for different purposes.

Polyester resin is a petroleum product. It comes in different grades for various purposes. What we need most for our work is the laminating resin which comes as a liquid, and thixotropic resin which comes in the form of a jelly. The resin changes into a solid with the addition of a catalyst (sometimes called the hardener).

To control the curing time, a chemical accelerator is added to the resin. The resin is marketed with the accelerator added or without. The accelerated resin is more convenient for our purpose.

When the required amount of catalyst is added to the resin and thoroughly mixed, it begins to harden or polymerise. This is a chemical reaction which produces heat within the mix, and the liquid turns into jelly first and then gradually hardens into a solid. The time taken for the mixture to turn from a liquid to a jelly is known as the gel time and varies according to temperature, humidity, etc. The gel time is longer when the mix is applied and spread to rather than when it in a container in volume. The workable time of a catalysed resin mixture is the time it will remain in the container or the mixing pot before turning into a gel and begins to harden, (known as pot life). Therefore the hardener should be added only to such quantity of the mix as could be fully used before it begins to gel and solidify.

For making glass fibre reinforced polyester resin casts, we require glass fibre chopped mat, polyester resin, thixotropic resin, accelerator, catalyst, pigments and fillers and tools brushes and ancillary material such as release agents, barrier creams, etc., and also such solvents (for cleaning brushes) as methylated spirits or thinner or acetone.
Fillers are required mostly for sculptures.

For most of my work, I make my own fillers. I use finely crushed stones of all varities, granite to micasious stone and limestone. Though fillers should be inert, limestone does react slightly with polyester resin mix with some degree of colour change, which I turned to good advantage. I remember using ground calicut tile powder for casts of a terra-cotta head. Also to simulate the texture of cement plaster on the nose of the man and horse sculpture at Isurumuniya, I added a little fine sand to the pigmented resin. I have even used thoroughly dry wood flour and paddy husk as filler and made some excellent reproductions of wood carvings. Only once did I import some bronze powder.

I have not hesitated to try out innovative methods. I not only strived to get the correct colour and texture of the cast from the gel coat, but also incorporated colours and details in the mould itself so that there was little or no touching up of the completed cast.

For instance the Buddha and bodisatva heads from Yatala and from Ambalantota and from Tissamaharama had in them bits of egg-shell plaster adhering to them. I touched them in the mould and got a perfect and natural cast. Also I have got good simulations of bamboos, arecanut stumps, plantain strips (kehel paturu) by this process. Much experimentation and imagination had gone into these.

For making a cast, gel coat sufficient for a full application over the mould should be made in the first instance, otherwise changes in the colour and texture can occur in the finished cast.

Pigments can be obtained from the dealers who supply resin and glass fibre mat.

After the gel coat is prepared, take as much mix as could be applied before it begins to set in the vessel, add about 1% of hardener, and mix well. Then brush the catalised gel mix on the mould treated with a parting agent, using a stiff yet soft brush (I use the Ravi brand or equivalent) making sure that all nooks and crevices
are well covered and that no air pockets are left.

When the entire surface is uniformly covered the gel coat is left to harden before laminating begins. In our temperature and humidity this may take about 20 - 30 minutes. Whilst the gel coat is setting preparations can be made for the laminating stage. Laminating mix should be made as for the gel coat but without the filler and also a lesser percentage of thixotropic paste resin (about 10%).

Remembering that the pot life is limited add the catalyst to only that much resin mix that can be used before it gets hardened. Glass fibre should be cut up for laying in position. When the gel coat has hardened sufficiently brush the laminating mix on the gel coat, place the glass mat on top and tamp it with a stippling action forcing the mix up through the glass fibre. Each piece of glass fibre mat should overlap the other already laid by about an inch or so and the final one overlapping the edges by about two inches. About three layers should be the minimum. Ensure that all the glass fibre is completely saturated and that no air bubbles are left trapped. Resin mix sufficient to saturate the final layer is all that is needed.

Casting a two piece mould is slightly different. Here the method I adopt is to cast the two halves separately and then join them together unless it is a very small mould.

The gel coat is painted over a part mould going up to but not over, the joining edge. When the gel coat has cured, and higher spots are carefully examined to ensure that they are fully covered treat the other half mould also in similar fashion. When the gel coat has hardened sufficiently, apply a coat of laminating mix and lay the glass mat and laminate as before. The glass mat is stopped short of the joining edge to prevent fouling when joining.

When the two half moulds have cured, bring them together in their cases, see that they are in proper register and tie them securely together (in larger moulds, I provide bolts and nuts for this purpose). Then make up a mix of sufficient gel coat, add catalyst, and pour the mix into the mould down the seams making sure that the gel coat covers the seam fully right round. Keep the mould moving until the gel coat cures.
Next, cut up some strips of glass fibre mat one and a half to two inches wide. Also prepare some laminating mix and pour it over the seam and apply it well over the adjoining glass fibre mat reinforcement. Place the glass fibre strips one piece at a time, and impregnate them well with the laminating mix, making sure that they cover the joint as well as the adjoining glass fibre reinforcement, so as to make a continuous reinforcement across the seam. After a lapse of time - say about three or four hours - the mould can be stripped off: first the casing and then the rubber mould itself.

Casts should not be kept for unduly long periods in the moulds without stripping them off. The longer it is kept, the more difficult it becomes to release the cast from the rubber mould. I lost both the cast and the mould of an important piece of sculpture this way.

Casts, when released, should be examined for possible flaws which must be rectified. Casts of two piece moulds often have some resin extruding at the joints. These should be carefully chiselled off, and the joint touched up. Any filling can be done with resin and appropriate filler with hardener added.

If parting agent is adhering to the cast, it can be removed by wiping off with the suitable remover, and the cast finally tinted or painted to obtain the desired finish.

What I have described above is just one process of making a flexible mould and taking a cast off it in glass fiber reinforced polyester resin.

Though there are any processes of making flexible moulds, moulds of rubber latex was solely developed here by a few dedicated persons.

The largest cast made so far of a rubber latex mould is the Dambegoda Bodhisatva head (11 feet high). The mould was taken at site by the technical staff of the Archaeological Department under my directions, and the cast was made in Colombo by staff employed by me.

The largest cast of reinforced glass fibre made in Sri Lanka is that of the
Polonnaruwa Recumbent Buddha, made for the Commonwealth Exhibition at Earls Court, London, in 1981, by staff of CEYNOR Company. Here, a split type mould of reinforced polyster resin bolted together was used.

In taking rubber moulds, or any kind of mould for that matter, one must be extremely careful to prevent any damage whatsoever to the "master". If one has doubts about the stability of the "master", he should refrain from making moulds from it.

There are many do's and don'ts. In a short article like this, it is not possible to enumerate them all.

The artist's first concern must undoubtedly be the preservation of the "master".
INDIAN AND SRILANKAN EPIGRAPHY - A COMPARATIVE STUDY

By
K. V. Ramaesh

Contrary to what the title of my paper outwardly seeks to convey, my primary objective here is not so much to make a matter of fact comparison between the general format and contents of Indian and Sri Lankan inscriptions as to underscore the common and differing factors in the national psyche of the Indian and Sri Lankan peoples which have made the epigraphy of the two nations what it is. Parallelisms are no doubt available in good measure in the epigraphical history of the two nations but departures from one another, which are no less significant, serve to highlight, on the one hand, the inherent diversities of the Indian psyche, variously affected by numerous competing if not always mutually repellant cultural-cum-linguistic segments and, one the other, the mostly unitary Sri Lankan psyche built up through the centuries by the interplay of native and overly Indo-Aryan elements, peripherally though continuously affected and occasionally even threatened by Dravidian elements, mostly from extreme peninsular South India.

The most striking point is that similarities are superficial and owe themselves to perennial contacts promoted by geographical proximity, and deeper down are the differences of an abiding nature. For instance, on a superficial plane, we find that the epigraphical history of both the countries originates at almost the same point of time and with the employment of the same script. With the exception of the Asokan edicts of India, the early Brahmi inscriptions of both the countries are brief and terse. But the correspondence stops here. The Prakrit dialects of the vast Magadhan empire, the Phonetic peculiarities of the eastern Indian tracts with a predilection for the palatals, and the inalveolar gutturals of the geographically proximate proto-Dravidian speech, through curious intermingling, had already given birth to the archaic Sinhalese language which is noticeable even in the earliest Sri Lankan Brahmi inscriptions. The nature of the donations made and recorded in these early inscriptions also differs; in the case of India, the donative records mostly hail from the plains, with the exception of the early cave inscriptions in Tamil Brahmi whereas, like the latter, the nature of the donations recorded in the early Sri Lankan inscriptions was dictated by the mountainous terrain and mostly consisted of natural and rarely worked up caverns for the residence of the Buddhist monks who were already there (agata) and also for the future ones (anagata). What is more, while we
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easily discern, right from the beginning, an ongoing battle for supremacy between Prakrit and Sanskrit and between the Buddhist-Jaina and Brahmanical faiths, ultimately leading to the triumph of the latter on the Indian subcontinent, in the case of Sri Lanka no such internal conflict is discernible, Buddhism having become the predominant motivating force in religious matters with the numerically weak followers of other faiths tacitly acknowledging this fact. Speaking on a note of comparison, these very same factors, enunciated above, have added variety to the early Indian epigraphical scene, furnishing information on many otherwise unknowable points of early Indian history while, in the case of Sri Lankan epigraphy, the first impression gained is that of monotony though, as has been competently proved by some Sri Lankan scholars, they do provide on deeper study, worthwhile information on Sri Lanka's early socio-economic history.

Let us now examine, also on comparative basis, the history of epigraphical writing in India and in Sri Lanka. It is conceded on all hands that the Indo-Aryan migration to Sri Lanka had begun as early as in the 5th century B.C. At the same time it is being asserted by all scholars that the art of writing was for the first time introduced into this island nation by the missionaries sent for religious propogation during the days of Asoka in the 3rd century B.C. To say the least, this line of argument is the result of the peremptory premise that Asoka's are the earliest among all Indian inscriptions. On my part I have been labouring for some years now to establish that some of the early cave inscriptions in archaic Tamil and rudimentary Brahmi characters, from the Pandyan country, to the immediate north of Sri Lanka, are pre-Asokan by virtue of the absence of aspirates, conjunct consonants and, more importantly, the absence of the inherent a - vowel value in the bare consonants employed therein. How does this pre-Asokan possibility affect the Sri Lankan epigraphical scene as far as the antiquity of writing in this island is concerned? For delving into this question we must a priori assume that what Asokan Buddhists introduced into Sri Lanka was the practice of engraving inscriptions on rock surfaces and not the art of writing itself. It is a historical fact that when a language begins to be written down with a borrowed script, it is found wanting in conservative insulation. The written alphabet of Kannada and Telugu, two of the major Dravidian tongues of South India, was originally borrowed from the Indo-Aryan strain of the Brahmi script and we know only too well how greatly these two languages were influenced by Prakrit as well as Sanskrit right from the dates on which their earliest inscriptions were respectively written. On the other hand, when a language is
endowed with a script before it comes into contact with a more dominant language-culture, it would have developed an inbuilt natural resistance to outside influence. The degree of success of such resistance is, however, directly proportionate to the degree of dominance of the intruding language-culture. In the case of Sri Lanka, the absence of conjunct letter forms, the gutturalisation of soft letters (eg. naka for naga, nakara for nagara, badakarika for bhandagarika etc.), the replacement of dental s with palatal s (eg. sagasa for samghasa, etc.), the avoidance of aspirates and their replacement by inaspirates, hard or soft, all these seem to show that even before the introduction of Asokan Buddhists, pre-Asokan Sri Lankan orthography had been refused to writing. Otherwise the same fate which overtook Kannada and Telugu orthography would have overtaken ancient Sinhalese orthography too. My argument is that those gutturalisations, palatalisations and de-aspirations are indicative of the continuance of pre-Asokan linguistic features and that they would have succumbed to the influence of Asokan orthography if they had not been practised in writing in pre-Asokan days. We may, therefore, reasonably suppose that, like the ancient Tamils of the extreme south, the pre-Asokan Sri Lankans also knew the art of writing in rudimentary Brahmi letters and that, while the pre-Asokan Jaina migrants did it for the Tamil country, the Asokan Buddhists merely converted this already locally available writing into an epigraphical medium in Sri Lanka. But, while doing so, the Sri Lankans subjected the Indo-Aryan dialect to local phonetics and spelling which had marked parallelisms in eastern and extreme Peninsular India rather then northern India proper. Future discoveries and researches alone will answer the resultant question as to who employed this rudimentary Brahmi alphabet first, the Tamilians of the Pandyan region or the Sri Lankans.

It is in this light that we have to take note of the early Dravidian influence on the development of proto-Sinhalese language as is tellingly brought home by the usage of Dravidian marumaka for ‘grandson’ as against the usage of Indo-Aryan puta for ‘son’. An interesting fall out of this is the analogical change that has resulted in the adapted form parumaka and its variants occurring in the proto-sinhalese inscriptions. The borrowal here is obviously directly from Sanskrit pramukha and not from Pali pamukha as is suggested by the retention of the repha of pra in paru. Once the form parumaka came into popular use, its origin was perhaps forgotten and maka came to be related to Dravidian makan (= magan = ‘son’) as a result of which, on the Dravidian analogy of makal (magal = ‘daughter’) the feminine form
parumakalu (la/li) came to be used.

The next epoch in the epigraphical history of Sri Lanka should properly be taken to commence with the decline of Buddhism in India after the establishment, all over the subcontinent, of royal houses owing allegiance to the Brahmanical faiths, successively in and after the 4th century A.D. The loss of active royal patronage naturally resulted in the sharp reduction of officially sponsored Buddhist migrations and missions to Sri Lanka resulting in far reaching changes in the political, social, linguistic, palaeographical and epigraphical fabric of this island nation. Thenceforward we see the development of Sri Lankan Buddhism on the one hand and Sinhalese language, palaeography and epigraphy on the other, proceeding, though not entirely on independent lines, certainly with much less direct Indo-Aryan influence. Naturally enough, the void created by the decline in Indo-Aryan influence was filled up by influences from geographically proximate South India in general, the Tamil Country in particular and, there again, more particularly from the Pandyan region. This is nowhere better illustrated than in the format and contents of medieval Sinhalese inscriptions and their palaeographical features. These developments and changes which were inter-related may be listed as follows:

1. While, during the Buddhist epoch, the Prakrit dialects of North India served as the main sources for enriching proto-Sinhalese vocabulary, in the subsequent epoch, Sanskrit became the main source and its import into Sri Lanka was through South India, all the ruling houses of which were under the influence of the Brahmanical faiths. The Kuchcheveli rock inscription\(^1\) and the Tiriyay rock inscription,\(^2\) both of the 7th century, in Sanskrit verse, stand at the threshold of this significant linguistic switch over. This all-important transformation could be succinctly stated as the change over from siddham to sri or svasti-sri.

2. Being by then far removed from the scriptal developments that were taking place in North India, the Sinhalese script came to be tremendously influenced by the Grantha script of the Pandya and Pallava kingdoms which had been specially developed to suit Indo-Aryan phonetics, the Tamil alphabet having proved inadequate for that purpose.

3. It is but natural that this close contact between Sri Lanka and the southern tip of India got reflected in the format and contents of medieval Sinhalese
inscriptions. But, when studied in proper historical perspective, the Tamilian and Sanskritic elements in these Sinhalese records only serve to heighten the distinct and independent nature of the Sinhalese inscriptions. The basic reason for this lies, of course, in the fact that, as in the earlier epoch, an overwhelming number of medieval Sinhalese inscriptions continue to address their contents to Buddhism which had long before virtually vanished from the Indian soil. The general pattern of preamble, an operative part and an imprecatory portion noticed in many medieval Sinhalese inscriptions as also the vainglory, flamboyance and ostentation encouraged by the royal courts and amply reflected in medieval Sinhalese epigraphical preambles fall in line with the format of medieval South Indain inscriptions. But the more communicative medieval Sinhalese inscriptions are still not as communicative in detail as the Chola records but are nearer to the Pandya records. Again, from a perusal of the imprecatory passages, wherever they are found given, we are lead to believe that only the general idea was borrowed and that Sinhalese imprecations were so composed as to suit the prevalent Buddhist faith in a strictly Sri Lankan context.

These qualitative differences which highlight the independent genre of Sri Lankan epigraphy is tellingly brought home by the absence in Sri Lanka of commemorative epigraphs, particularly hero-stone inscriptions, which tell us so much about the national psyche of the Indians. It is possible that the Buddhist philosophy of self-denial and self-abnegation, inspite of its universal near-obliteration in course of time, gets reflected in the absence of such memorial inscriptions in Sri Lanka. Also this major difference may be attributed to the existence in India and its absence in Sri Lanka of the pressures generated by the national psyche, segmentary in the case of India and unitary in the case of Srilanka. For in the case of India where nationalism had always been challenged by segmentary considerations, there was a great need for incentives, material as well as spiritual, to draw men to the battle fields. This was not so in the case of Sri Lanka.
NOTES


DEVELOPING PROGRAMMES FOR MARITIME ARCHAEOLOGICAL SURVEY

By
M. Redknap

Much has now been published about underwater archaeology, and in the last thirty years a number of underwater excavations have received considerable media coverage. New discoveries and excavations have furthered the art and discipline of underwater surveying, stratigraphic recording, and the interpretation of ancient seafaring and trade. However, in concentrating on the high points of the last thirty years, one might gain the impression that underwater archaeology has become intellectually and spiritually dead, living off the grandeur of its achievements. The reality is that underwater archaeology has been developing and spreading at great speed. A growing number of professional archaeologists spend at least part of their time supervising underwater sites, whilst thousands of amateurs assist the professionals in many countries.

More developing countries now support scientific work on underwater archaeological sites ranging from (for example) the seventeenth century Portuguese vessel off Mombasa (Kenya), and trade centres dating from the ninth to the twelfth century off Malaysia, to pre-European craft off Korea and Thailand, and early ports and wrecks in the Indian Ocean (recently reviewed press in Rao 1988). This increasing awareness of the cultural importance of archaeological sites in the maritime zone by governments and institutions is extremely encouraging.

The vast number of sites which are now known provide us with new opportunities. Whilst the sites are not all of equal importance, the accumulation of data means that specialists can search for correlations, evolution and trends through time, spatial patterns and links and causes. Instead of treating artefacts only as objects of intrinsic beauty or technical achievement, archaeologists can start to interpret them as parts of culture, trade, economics, politics, industry and patterns of living. Obviously those working on the earlier excavations used comparisons with land sites to make such tentative deductions, but the increasing accumulation of information now means that more sophisticated analysis can be attempted on the basis of comparison between underwater sites.
There is a growing awareness in many countries that the underwater archaeological heritage belongs to the population at large, to the nation, to the community, and that nobody has the right to destroy it or exploit it for private gain; that if a wreck (or city) is too expensive to excavate and preserve in the dry, then it should be left and protected underwater. In parallel with principles applied on land in many countries, if social priorities demand the construction of a harbour motorway, barrage, or oil well, then preventative archaeology should be carried out first.

Another important trend in underwater archaeology relates to co-operation in many countries between amateurs and professionals. Many professional underwater archaeologists stress that their work would be impossible without amateur assistance. There are now sports diving federations in over sixty-five countries, and most of them show serious interest in underwater archaeology. Consequently it is not surprising that the number of new sites reported to the authorities should be increasing rapidly.

Owing to its geographical position in the Indian Ocean, centrally situated in the sea lanes linking the Near East and the East Indies, Sri Lanka has been an important landfall for seafarers for centres, being mentioned by over 40 classical Greek and Roman authors including Megasthenes, Strabo, Pliny the Elder, Palladius and Cosmas Indicopluistes (Devendra forthcoming) and many later writers. Cheng-Ho's Muslim interpreter Ma Huan's *Ying-yai Sheng-Lan* (1433) provides a description of country, and the names of coastal harbour sites including the Basses Reef (Mills 1970). Cheng-Ho's naval expeditions made several trips to the Island in the early 15th century and gave strong impetus to maritime commerce across the Indian Ocean. Li Chao (a Mandarim of the T'ang Empire) describes Sri Lankan ships several tens of feet in height (Devendra forthcoming). The nature of earlier cross continental contacts has been reviewed by Silva (1984). There are of course many wrecks in Sri Lankan coastal waters dating to the period of European expansion into South Asia. The Great Basses reef expedition in the early 1960s formed the first attempt at the archaeological exploration (albeit partial) of a wreck off southern Sri Lanka. Analysis established that coins from the site came from Surat (reign of Mogul Emperor Aurangzeb dated 1702) and that the ship may have been built in southeast Asia (Clarke 1957, 1964, 1984; Clarke & Wilson 1964).
In this paper, I would like to outline some recent developments in Britain to tackle common areas of concern in maritime archaeology.

UNDERWATER CULTURAL HERITAGE MANAGEMENT

The problems of establishing an effective management policy for underwater archaeology in Britain have recently been the subject of several review papers (Joint Nautical Archaeology Policy Committee 1989; McGrail 1989; Redknapp and Dean 1989). They can be simplified into (i) particular problems due to the nature of the underwater environment, (ii) the poor perception of underwater archaeology by planners, resource allocators, and the public (iii) inadequate resources. The first makes any work more expensive than on land, and threatens the survival of the site. The second area is clear to those of us involved in underwater work who recognise that it does not always have a very high standing among our land-based colleagues let alone some sport divers and other users of the sea. This is often because the image of underwater archaeology is coloured by the high profile of work sometimes purporting to be of an archaeological nature, but which forms nothing more than undisciplined artefact recovery. The lack of awareness of advances in underwater archaeological studies is, in part, due to the fact that information is too rarely disseminated through mainstream archaeological publications and conferences.

EVALUATION OF THE ARCHAEOLOGICAL RESOURCE.

This can be treated at two levels:
(1) the management of a centralised site register of data, and
(2) active fieldwork including pre-emptive survey and site inspection/recording.

Information on submerged sites, be they wrecks, harbours and anchorages, inundated landscapes and settlements, or foreshore ‘wetland’ sites, can come from a variety of sources. Apart from archaeological work, data of varying degrees of value is collected by sport divers, commercial fishermen, geophysical surveyors, engineers, and here in Sri Lanka tropical fish collectors. Some of this information is considered to be of ‘commercial value’, and consequently is often difficult or impossible to obtain through formal channels.
There is pressing need for collection and assessment of all this data, particularly in the face of escalating intensity of threats to sites from salvage and souvenir hunting, mineral extraction (such as reef mining), coastal and seabed erosion, and port developments. What is required is an effective management programme utilising available resources, and a policy of survey and preservation in situ of appropriate areas where high archaeological potential is accompanied by perceived threats. Effectiveness will depend to some extent on the incentives for interest groups - such as recreational incentives along the lines of marine sanctuaries to direct the tourist interest away from souvenir hunting, fostered by the involvement of interest groups in implementing the recording and conservation of sites.

In Great Britain, data collection on wrecks as potential navigation hazards in U.K. territorial waters is part of the function of the Hydrographic Department of the Navy, and they have more than 100,000 records worldwide. A proportion lie within British territorial waters, most of which are related to comparatively recent wrecks. The National Maritime Museum (Greenwich, London) holds archaeological records on over 80 sites around Britain, and has a computerised shipwreck index which includes 1,600 pre-1,800 wrecks, only a small proportion of which are in British waters. The Royal Commission for Historic Monuments (England) holds some 200 ‘underwater’ sites in the National Archaeological Record. It has now proposed that a National Inventory of underwater archaeological sites be established and that studies should be undertaken to develop satisfactory recording strategies for the National Archaeological Record (NAR) and for county Sites and Monuments Records. Provision has recently been made in RCHM (E) budget for an enhancement of the NAR nationally in 1991, and this is obviously a welcome step forward.

Seabed evaluation has been undertaken with the support of institutions. For example, the National Maritime Museum has supported some limited area surveys and individual site assessment. The Archaeological Diving Unit based at the Scottish Institute of Maritime Studies, University of St. Andrews, is a small full time team of archaeologists contracted to the Department of Transport which is responsible for administrating the safeguard provisions of the Protection of Wrecks Act 1973 and the Procedures for the disposal of wreck recovered under part IX of the Merchant Shipping Act. The ADU provides the Department with expert first-hand reports on sites proposed for designation, reports on the standards and achievements being
made by licensed divers on existing designated sites, and offers advice to licensees. Its brief now includes the survey of areas and site identification. One of the most active amateur groups in the survey field is Marine Archaeological Surveys (MAS), which was formed in 1983 as a registered charity specifically to survey areas and evaluate sites of interest. Run by volunteers who include archaeologists, geophysical surveyors and electronics engineers, it has developed close links with the offshore survey industry and has acquired its own remote sensing equipment. So far it has specialised in building up a seabed evaluation of the archaeology of the Thames Estuary and the Goodwin Sands. The Goodwin Sands lie four miles offshore from the Kentish Town of Deal (Fig.1). The Sands and the Downs, the wide anchorage bordered on the east by the sand banks, have been the setting for hundreds of shipwrecks, and the Goodwin Sands have long been known as the ‘great ship swallower’. The area has been gaining notoriety for the looting and destruction of Britain’s maritime heritage that takes place there. The area is large from the 5 metre contour at the North Sand Head to the same contour at the South Sand Head: the distance is approximately 10 sea-miles, and the width at its widest point just north of Kellett Gut is 2.5 sea-miles. Only a relatively small proportion is ever exposed at low spring tides, and the precise area fluctuates according to the effects of wind, wave and sand movement. The Goodwins have been regularly re-surveyed by the Hydrographic Section of the Navy, who have recorded advances in the western scarp of the Goodwins of up to 60 m. a year. The 1979 discovery of four ships-of-the-line wrecked in 1703 may be associated with the development of a New Cut and shifts in the sand patterns.

Speculation on the total number of shipping losses in the area continues. Examples of loss are documented in the Calendar of Domestic State Papers, Calendar of Close Rolls, Lloyds list (1743 - 1850), Admiralty and Board of Trade Returns from 1843 to the present, lifeboat journals from 1850, Kent newspapers, the Burney collection, and other sources. Few of the historically attested losses have been positively identified, and of the known wrecks only four are currently scheduled under the Protection of Wrecks Act 1973.

Finds have regularly been dredged up from the vicinity of the Goodwins, offering important signposts to sites of archaeological importance. For example, a bronze breech-loading gun with swivel mount and iron ‘rat-tail’ stock was found in 1775 in the Gull Steam while sweeping for anchors, and an iron swivel gun of 16th
century type dredged up by Deal 'hovellers' c. 1928 off the South Goodwins, sole
evidence for another early loss. More recently, in 1988 an iron swivel gun was found
in the trawl of a local Ramsgate fisherman while working to the west of South Sand.
Closest parallels for it are the three swivels from the Cattewater Wreck discovered
in 1973 (dated to c. 1530), one in the Stockholm Stadsmuseum from a 16th century
wreck, and an example in the Nederlandsch Historisch Scheepvaart Museum.

The vast quantity of data to be collected is hinted at by the data collected by
MAS from 'local' fishermen; over 317 net-fastenings are known for the area
between North and South foreland, of which 283 are classified as 'obstructions', 12
coherent wrecks that are now spread, and 3 protected wreck site. The chart for the
area contains a total of 141 wreck sites (Fig. 1). Of 226 known losses recorded by
Trinity House, over half are of World War II date.

Areas for which geophysical surveys have been completed lie on the west side
of North Sand (Fig. 2, Areas A & B), in Kellett Gut (Fig. 2, Area C), to west of South
Sand (Fig. 2, Area D) and north-east of Dover (Fig. 2 area E). The survey of Areas
A-C was completed in 1983, using Waverley 3000 dual channel sides and sonar, ORE
sub-bottom profiler, and ELSEC magnetometer. The results were divided into two
categories, those concerned with the location of possible archaeological sites, and
those concerned with the survey as a pilot study for future work. The anomaly plot
distribution of part of the survey area (which totalled 7.5 km²) has indicated the
great potential. A total of 98 targets were recorded, together with the course of the
channel through the sand banks. The majority of anomalies were located within the
channel as isolated events or significant clusters, and three such clusters are the three
protected wrecks of 1703 mentioned above: The 'stirling Castle', 'Northumberland'
and 'Restoration' (in 1980, 1981 and 1981 respectively). Wreck D (Fig. 3) is
approximately 75-80 m in length, and metallic, as is wreck E. The density of magnetic
anomalies in the sandbanks appears similar to that in the channel. The results
completely validate the triple sensing system employed.

With the exception of some port and harbour areas which are not in Crown
ownership, the Crown Estate Commissioners own the freehold of the seabed within
the "twelve mile" territorial limit. Beyond territorial waters, the Commissioners are
responsible for the Crown rights to exploit the natural resources of the UK's
Continental Shelf, excluding oil, coal and gas. Contrary to the belief that no
archaeologically interested wrecks fall within any existing areas (generally between 3 and 15 miles offshore), the case of the Admiral Gardner (wrecked in 1809) illustrates that important and well-preserved sites most certainly survive often in remarkable conditions, within such areas (Fig.1). The density of net fastenings for the area tends to reflect fishing activity and not actual distribution. Nevertheless the need for their archaeological evaluation remains.

The work by MAS on the Goodwins has helped alongside the work of the National Maritime Museum, ADU and other bodies to illustrate the need to develop an adequately resourced programme of survey and recordig by trained archaeologists to ensure that the appropriate Secretary of State is furnished with an up-to-date database of archaeological sites under threat, for the purpose of designation or protection. Recommendations have been made by a Joint Nautical Archaeology Policy Committee that the Government should activate through existing legislation a policy for the survey and preservation in situ or by record of the underwater cultural heritage within territorial waters (Joint Nautical Archaeology Policy Committee 1989).

In Britain, the Heritage bodies for England, Scotland and Wales (English Heritage, Scottish Development Agency and Cadw respectively ) help administer the Ancient Monuments and Archaeological Areas Act 1979, which allows scheduling of underwater sites considered to be of national importance. There is a strong body of opinion that would prefer all submerged sites to be dealt with by ‘heritage bodies’ because they are likely to be more sympathetic in the long term to the problem of protecting underwater sites than other bodies.

The nautical Archaeology Society has recognised that education can play almost as important a role as legislation in the protection of the underwater cultural heritage. In recent years a training scheme has been formulated, which now has an established track record with courses in numerous localities both in Britain and abroad (most recently in Goa, India). The courses follow a carefully designed syllabus, and is arranged in 3 parts - part I forms and introduction over 2 days, part II on techniques is designed to build upon the theory and techniques introduced in Part I with a more advanced lecture series, and is modular (does not have to be completed in one session). A certificate is awarded on completion of lectures, practical and conference requirements (for further details contact Miss Dawn
Summers, c/o Scottish Institute of Maritime Studies, St. Andrews). The NAS certificate provides recognition that the participant has attended an approved and recognised course. The areas of competence covered should form the basis of a system of continuing education, though presently formal opportunities are variable and limited.

SURVEYING IN SRI-LANKA.

Nautical archaeology in Sri Lanka has recently been the subject of several review papers (Devendra 1988, 143; Gunaratna 1988, 145). Historical sources such as Marine Department Records, India Office Library and Records, General State Archives of the Netherlands, and Department of National Archives, Sri Lanka record many losses over the last 300 years, including the S. Joao Baptista lost near Colombo in 1653 (Rao and Gudigar 1988), the Streetkerke (1741), Polaanen (1753), Elswout (1756), Den Arend (lost near Batticaloa; Memoir of Jan Schreuder, Governor of Ceylon; Reimers 1946, 16) the East Indiamen Euphrates (lost off Ceylon in January 1813) and Duke of Kingston (burnt in August 1783), Bengal (burnt at point de Galle, January 1811), H.M.S. Diomedes (1795), and H.M.S. Daedalus (1813) (Fig. 4). While such ‘early modern’ vessels are of importance, the identification and care of vessels pre-dating the arrival of the Portuguese and of early native craft would be an important milestone in the annals of international archaeology.

The need for a programme of controlled archaeological investigation has been outlined elsewhere (for example, Redknap and Weerawardane 1986). Limited exploration has already shown the potential benefits of a coherent maritime archaeology programme. For example, surface finds have been made in Galle harbour, 115 km south of Colombo (in litt. S. Devendra). A scatter of pottery including local and imported wares was found in 1986 by divers on the sandy bottom of the harbour along a 200 m. long perpendicular to the northern shore line. These finds, now deposited with the Department of Archaeology in Colombo, reflect the longevity of the bay as an important anchorage (fig. 5). More recently, during March 1990, an archaeological survey team from Great Britain together with the National Aquatic Resources Agency (NARA) acting on behalf of the Government of the Democratic Socialist Republic of Sri Lanka ran a site investigation survey of the Drunken Sailor Rock (Galua) off Colombo, Sri Lanka (Fig. 4). The archaeological
site was identified by local divers some years ago, at a depth of 9 metres, and assumed to be the location of two jettisoned cannon (Figs. 6-7). In 1986 two more cannon were identified, indicating the location of a 17th or early 18th century wreck on the south side of the reef. They all appear to be the same size, and made of cast iron. One cannon could be recorded in detail, and measured 1.36 m. in length from muzzle to end of cascable. It had a bore, somewhat roughened by ears of immersion, of approximately 7.2 cm. When recorded in 1986, approximately one year after it had been raised by local divers and mechanically cleaned of concretion, the base ring, vent astragal and first reinforce ring were severely corroded, but sufficient evidence remained to suggest the original form. No marks could be discerned. The dangers of lifting guns from the sea in the absence of conservation facilities was clearly demonstrated by reinspection of the untreated gun in 1990. In the intervening period the muzzle and cascabel button had dropped off. The cannon may be of 17th century type for merchant service (in litt. Ruth Brown). The objective of the 1990 survey was to investigate the natural and archaeological features of the find spot, using sounding ad magnetic techniques.

The Drunken Sailor reef forms part of the third sandstone (beach rock) crest described by Swan (1983, Figure 10.5), which runs north south along approximately 10 m. level from south of Mount Lavinia northwards to Ona Gala and beyond (and is known as Degalmeda). Bottom deposits from Colombo area in general coarse white sand with rock outcrops (and coral) (Cooray 1984, Fig. 4. 12). The charted contours suggest that the seabed gradient is slightly concave seawards, and that the large outcrops may be smooth, but possess gullies and runnels. The Drunken Sailor outcrop appears SW of the rocky foreshore of the one-time headland visible above the high water mark at Fort and recorded in 17th century charts as Gal boca (Map of the bay, city and fortifications of Colombo 1655 : Paranavitana 1984; known now as Galbokka Point). The shallow peak of the Drunken Sailor Reef suggests that in exceptional weather, it may be exposed or at very least dangerously close to the surface, by large waves or swell.

THE 1990 SURVEY

The 30' fibreglass survey vessel provided and manned by the Sri Lanka Navy was used on site. Lane control was provided by use of a shore-based line-of-site theodolite and ship-shore two-way communications. Polar Laser Positioning System
Navitrack navigation receivers were interfaced to a lap-top computer-plotter system for line control and data logging for plotting at 20 second intervals, with manual Fathometer fixing via shore station to sounder operator with 2-way communications.

Water depths have been resolved to 0.1 metre, plotted on charts and contoured at 1 metre intervals (Fig. 10). At the location of archaeological site the depth is 9 metres LAT. The maximum recorded depth of 15.2 metres occurs in the NW of survey block, and the minimum of 3.4 (as recorded) on the western part of the Drunken Sailor Rock formation. The seabed shape within the 800 m² survey block runs down to west, interrupted by several rises in the bottom relief to the south of the main feature of the Drunken Sailor Rock formation. These subsidiary rises are in the order of 1-3m above slope and suggest vestige extensions of the Drunken Sailor formation, which comprises two major sandstone reef rises, separated by a chanel or gully 40-50 m wide and a charted depth of 10-11 m. All these sandstone features show irregularities in outline, and the N.S. gully appears to possess a central ridge or rise.

It will not be possible to identify the Drunken Sailor Reef wreck, until closer dating evidence becomes available but this initial bathymetric survey provides an important record of the site topography and first stage of possible multi-disciplinary examination and evaluation of the site. The source data for this area from the Admiralty charts was collected in 1906. Looking at environmental factors and the process of wreck formation. The general period is well documented and published. For example, as prelude to the Dutch seizure of Ceylon, 13 ships appeared off Colombo in 1642 compelling the Portuguese settlers and soldiers to abandon their territories to defend the force. The Dutch force continued to alarm the Portuguese for 35 days, tacking up and down the Colombo coast, finally leaving for Galle. In their assault on Colombo in 1656, the Dutch ship Maid of Enkhuysen was sunk while attacking the Santa Cruz breastwork from the harbour (Pieries 1948). The memoirs of the Dutch governors provide an insight into maritime affairs in the later part of the century. Governor Ryckloff Van Goens distinguished himself in action in 1953 when visiting Ceylon, destroying 5 Portuguese galleons bound from Colombo to Goa, and according to his memoirs on his retirement the Ceylon naval force was of some considerable strength, consisting of 8 ships of war and fuits, 5 native ships, 2 gallots, and 20 small yachts, frigates, sloops and boats (Reimers 1932).
CONCLUSIONS

Simple projects such as the Colombo reef survey on coastal sites in Sri Lanka could with multi-disciplinary and inter-departmental co-operation become training grounds for future Sri-Lankan archaeologists with responsibilities for marine (as well as land) sites.

Areas of concern common to most countries: the need for organised programmes of data collection for maintaining high standards of field work, the provision for training, for conservation facilities and for curation of maritime material, for recognition of the need to influence public and professional attitudes towards underwater archaeological heritage, and for protection of sites in situ. The solution to each will vary in detail between countries. Considerable gains will be made by co-operation between government and non-governmental the help of organisations, with multiple source funding - between both archaeological and related disciplines - and the opportunity to pool resources. The creation of archaeological reserves on the Basses, and of national Marine Sanctuaries, has provided an important means of resource protection (both natural and archaeological) where enforceable. Amateur enthusiasm, interest and resources can if properly directed also enhance significantly attempts by the archaeological world to create the effective management programmes of our historic sites to the benefit of scientific research and public education.

ACKNOWLEDGEMENTS

The Drunken Sailor Archaeological Survey was undertaken by a team of British archaeologists from the National Museum of Wales and University of St. Andrews jointly with the National Aquatic Resources Agency, with support from the Maritime Heritage Trust of Sri Lanka in obtaining Archaeological Advisory Board and Department approval and permits, approval of the Ministry of Defence, and the Ministry of Foreign Affairs and preparing the groundwork for Sri Lanka Naval logistical support. To these, I am extremely grateful. Funding from Britain came from the Royal Geographical Society (Geographical Magazine Trust fund), British Academy, and Society for South Asian Studies and I grateful to these bodies for their support. I would like to thank in particular the following individuals for their contributions: 1990 Sri Lanka expedition: (from NARA) Dr. Hiran W.
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FIGURES

Figure 1. Charted wreck sites off the east coast of Kent (UK) (scheduled sites designated by stars).

Figure 2. A-E: Areas of Archaeological survey around the Goodwin Sands 1-2: Areas designated for sand extraction.

Figure 3. Detail of 1983 survey of the Goodwin Sands (area A).

Figure 4. Map of Sri Lanka, showing approximate position of some historically attested sites.

Figure 5. Range of Pottery from the bed of Galle harbour 1-9: local wares; 10-12: import china (18th-19th century); 13-18: 17th-19th century bottle fragments. Scale 1:4

Figure 6. Iron gun from the Drunken Sailor site, Colombo, photographed in 1986 at the Kinross Club, Wellawatta, Colombo.

Figure 7. Iron gun from the Drunken Sailor site, Colombo. Overall Length = 1.36 m

Figure 8. Running survey lines on the Drunken Sailor site, Colombo, March 1990.

Figure 9. Two cast iron cannon photographed in 1986, lying in a rock gully on the Drunken Sailor site (one behind other, cascabels towards camera). There appears to be little weed cover and only a thin deposit of mobile shell and sand in the gully of this high energy zone.

Figure 10. Contour survey of the site (March 1990). Depths are in metres, plotting courtesy of NARA.
NEW LIGHT ON DARK AGE WALES

By
M. Redknap
A. Lane
and
E. Campbell

INTRODUCTION

In this paper we have taken the opportunity to present to the Second Centenary of Archaeology in Sri-Lanka an account of recent work on a partially submerged settlement site in Wales (U.K.). The use of some of the techniques employed on this site has generally been restricted to underwater sites. This brief account may illustrate wider applications outside the U.K.

For the Dark Age or early medieval period in Wales (from the termination of Roman political control to the beginning of the Norman Conquest), evidence for settlement is sparse, and comments necessarily imprecise and general. Remarkably few early medieval settlement sites have come to light in Wales during the last twenty-five years. The scarcity, or absence of diagnostic pottery and metalwork, and problems of ground recognition of certain types of settlement (except for occupied hillforts like Dinas Powys (Glamorgan) and Dinas Emrys (Gwynedd), contrasts with an increasing amount of evidence from some other areas of 'Celtic' Britain and Ireland, where ringforts, crannogs, promontory forts and various kinds of undefended settlement have been recognised in greater quantities.

Recent work by the National Museum of Wales and University of Wales College of Cardiff on a crannog or artificial island in Llangorse Lake, Powys, is now shedding new light on one rare form of Welsh settlement. Its importance lies in its ninth-tenth century royal associations its plan, and the special qualities of preservation of structural and excavation evidence in a period poor in material remains.

Llangorse Lake lies at 150m. above sea level, in a hollow between the rivers Usk and Wye overlooked by the Old Red Sandstone scarps of the Brecon Beacons and
Black Mountains (Figs. 1 & 8). At 160 hectares it is the largest natural body of fresh water in South Wales, but it is nowhere more than 7m. deep. The crannog lies about 40m. from the present northern shore, in water about 1m. deep.

The lake figures prominently in Welsh folklore and antiquarian tradition, with accounts from the twelfth to the nineteenth centuries of sunken palaces, water spirits and other supernatural occurrences (Rhys 1901: 70-4). Gerald of Wales, writing in the 1190s, noted the wealth of fish and eels in the lake, its occasional green and red-coloured currents, now believed to be algal blooms (Jones et al. 1978: 642), and tales of drowned landscapes and buildings (Thorpe 1978: 94-6). There now seems little doubt that the early traditions of sunken buildings, though amplified in later centuries, relate to the recognition of vestiges of the timber planks of the crannog which would have been more prominent in the past.

The site was discovered in the late 1860s by two local antiquarians, Edgar and Henry Dumbleton, after the lake level was lowered by 18 ins. (0.45 cm.) (E Dumbleton 1870; H. Dumbleton 1870). In the publication of their observations, they described a substantial mound of boulders, lying on top of brushwood, reeds and lenses of sand. They noted that the south and west sides of the mound were edged by one or two Oak palisades. Examination of the site in 1987 by Dr. A. Lane and E. Campbell, who also led the 1989 University team, established the continued survival of timber on the site some 100 years later, revealing two lines of radially split oak planks to the south of the island. Initial tree-ring dating of one sample gave a ring sequence from A.D.747-859, suggesting construction work in the late ninth or early tenth century (Campbell and Lane 1989).

In July and August, 1989 the National Museum of Wales and the School of History and Archaeology, University of Wales College of Cardiff, jointly conducted survey and excavation both above and below water on the crannog. Recording by conventional land techniques such as triangulations/trilateration and drawing by 1m. square drawing frame was extended underwater and combined with 1:1 tracings on clear PVC sheet and Direct Measurement Survey. In general, this is similar to land surveying techniques (for example, tape measurements are taken between points and levels are recorded), but there may be more freedom of choice of measurements. Tape measurements may not have to be kept horizontal but can slope between two points at different depths, one being a labelled datum point of
known 3-dimensional cartesian co-ordinates - in some instances nails fixed to carefully selected vertical plank piles of the crannog itself (see Figs. 3-4). Instead of hand plotting, the measurements are fed later into a computer programmed to analyse the measurements and calculate the position of the unknown point (s). With this kind of technique, extensive check measurements are normally taken, and in this case the computer will search for the position that best fits the available information, and in addition will highlight any measurements that seem to be wrong so that they can be rechecked. From this information the archaeologist can quantify the errors in the plan, and by adding extra measurements refine the survey until its accuracy meets those specified in the project plan. This is useful on low visibility sites such as Llangorse crannog where supervision and visual checking of data may be difficult.

Two families of mathematical techniques can be used to process the recorded measurements - the Variation of Co-ordinates (often known as Least Squares), and Multidimensional Scaling. Although each has specific advantages and disadvantages over the other, in general their use is similar (see Rule 1989, 157-162 for details of this technique). In practice the time taken in the field to record measurements will depend considerably on the technology available for the hard copy data. At Llangorse hand written measurements increased the survey time considerably. Use of tape recorders by divers or diver to surface communications in lieu of writing pads have advantages when reliable.

THE SURVEY

Initial survey in 1987 and 1988 had confirmed the nineteenth century identification of the site as a probable crannog with two lines of oak plank palisades, and provided dendrochronological samples of late ninth-early tenth century date (Lane and Campbell 1988a, 67-8). During further site inspection in November 1988, several exposed areas of roundwood were noted on the south-eastern and western shores of the island and it was clear that detailed underwater and shoreline survey would increase the number of timbers recognised and planned already. Consequently, further detailed survey was undertaken in 1989 of the island foreshore on the west, south and east sides and of the submerged and partially exposed timber lines reported on previously (ibid, 67, Campbell and Lane 1988b, figs.1 and 2). This was accompanied by resistivity survey of the dry and cleared part of the island in advance
of excavations and detailed contour survey above and below the waterline. Additional oak upright planks were identified filling in and extending the two main lines. A regular setting vertical roundwood piles c. 5-6cm. in diameter lay immediately behind the vertical setting of the inner plank palisade to the south and east of the crannog, and a band of vertical piles discovered in shallow water some 4m. south of the outer plank palisade, running parallel to it, in an east-west arc.

Selective excavation was undertaken to examine the island's composition, refine the site chronology and recover environmental data.

Area A was an L-shaped trench on the eastern side of the crannog. A complex sequence of late rubble deposits at the east of the trench indicated probable post-medieval activity on the island, perhaps associated with fishing. Beneath these layers lines of vertically set hardwood planks running approximately E-W divided the trench into two discrete areas. The southern arm of the trench contained red sandstone boulders comprising the carefully laid stone core of the island, which was clearly bounded on the north by the inner oak plank line. Underlying the rubble was a horizontal bed of roundwood laid in regular fashion and again bounded by the inner plank line. The roundwood at the northern end had been laid at right angles to the inner plank line, whereas at the southern end it had been set at 90 degrees to this. The roundwood bedding that had been exposed varied in thickness and quality of preservation across the trench. Regularly spaced hardwood beams lay above the roundwood, sometimes held in place by small split pegs driven through large square joint holes, and presumably acting as a timber bracing for the brushwood raft. These hardwood beams were clearly reused from some earlier structure providing rare evidence for a Dark Age timber building in Wales. The eastern area of the trench contained silt deposits and considerable evidence of burnt timber. An upper deposit of bone and frequent finds of carbonised grain suggest the presence of middens external to the crannog. Vertical piles lay some 4m. to the north of the plank palisade line and irregularly elsewhere. Trench B ran into the lake from the southern shore. Behind the plank palisade line at the northern end of the trench, red sandstone boulders overlay a horizontal hardwood beam on a bedding of roundwood which continued an orientation picked up in the south-west corner of area A. This stopped behind a line of vertical stakes constructed with wattle which had collapsed outwards onto further roundwood. No timber was found between inner and outer plank palisades, which were found to penetrate the 'natural' shell marl by up to 1.3m. Three,
planks, from each line, showed clear evidence of reuse from earlier structures.

Area C was used as a preliminary investigation of the northern shore of the island. Due to past use as a landing area and other erosion factors, stratified crannog deposits only survived at the southern end of the trench (stippled area, fig. 5). The area was divided into 1m. sectors, and all the surface silt from the lake bed within each quadrant was sieved using 4mm. mesh, to establish the degree of bone survival. One large squared timber pile was recorded in its centre.

Area D examined in detail an area of exposed roundwood, the surrounding foreshore being cleared of wood and modern surface silts prior to planning. The palisade was found to continue around the east side of the island. Vertical roundwood piles (8-19cm. in diameter) lay to the north and at regular intervals in a line 1m. to the east of the vertical plank palisade. One area of exposed roundwood within the palisade line was examined in detail (area D 1), and evidence found for a vertical post-and-wattle revetment within and parallel to the plank palisade. The piles supporting the wattle extended approximately 1.8m. into the shell marl. To the west, sandstone boulders lay above a deposit of roundwood, which had been set in regular fashion perpendicular to the revetment, and overlay a deposit of peat. The revetment had collapsed outwards towards the lake and foreshore.

Apart from a small quantity of medieval and later pottery, glass and lead net-weights, few artefacts were found, and none were recognisably Dark Age. Carbonised grain and animal bone from various area suggest a mixed economy, and the excellent preservation of timber exhibiting cut marks and cut joints from earlier usage, will provide information on woodland management and Dark Age wood technology in Wales. A quantity of worked flint is of late Mesolithic date (in litt. Dr. S. Green), though none is yet securely derived from pre-crannog deposits and its significance remains obscure.

DISCUSSION

The 1989 excavation and survey season at Llangorse has confirmed the essential validity of the Dumbletons’ nineteenth century description of the site and identified many of the key features of the 1870 plan (Dumbleton, E.N. 1870, fig. 1). The island is artificially constructed, though a shallow deposit of peat underlying part of the
island suggests that the crannog may have been built on a natural shallow of the lake. Environmental assessment of the peat and peat-shell marl boundary should provide evidence of the water depth in which the crannog was built. The carefully planned pattern of construction of the site implies an ability to call upon a high level of specialized knowledge, labour and materials, and the 1989 evidence suggests that the crannog may not be of single phase construction. The initial phase may have comprised approximately 50% of the island’s present area, with subsequent extensions into the lake on the south and west. Initial dendrochronological analysis of these new planks gives a 167 year tree-ring chronology of AD 693-859 and confirms the contemporaneity with the other plank revetments of the mound (in litt. C. Groves). Sapwood survives on many of the oak palisade planks when protected by shell marl and further dendrochronological dating of selected timbers should clarify the present dating of the site, and whether it is to be associated with the tenth-century court of Twdwr ap Elisedd, or is earlier in date. Certainly all dendrochronological dates from both inner and outer plank palisades indicate late ninth/early tenth-century felling of the timber though clearly the evidence of re-used timbers could add an unknown date bracket onto the crannog construction.

Many of the crannogs known in Ireland are rich in finds and seem to be of higher status than the standard ringfort sites (Lynn 1983: 51). A royal presence is historically attested at Lagore from the 8th - 10th centuries, and it is likely that many of the larger crannogs are royal or princely sites. Could Llangorse be a royal crannog? Manuscript B of the Anglo-Saxon Chronicle tells that shortly before midsummer 916 ‘Aethelflaed sent an army into Wales and destroyed Breccenanmere and captured the king’s wife and 33 other persons’ (Taylor 1983:64). Breccenanmere or Brecknockmere was the English name for the a Lake (Llyn Syfaddan in modern Welsh) until the mid eighteenth century. The Chronicle mentions an attack on the Mere itself, and as no other sites are known on the Lake, this must refer to the crannog, and it is here that the queen, presumably the wife of the local king of Brycheiniog, was captured.

Further evidence supports a royal presence in the vicinity including a Llandaff charter, ostensibly of the eighth century, claiming that King Awst of Brycheiniog and his sons gave Lann Cors and its territorium to Bishop Euddogwy (Davies 1979 : 98, No. 146). The bounds, written in Welsh and unlikely in their current form to date before the tenth century (Davies 1978:29) indicate a substantial estate of over 100
hectares; they show that the local kings had lands and presumably a residence in the area. When followed from topographic evidence this estate corresponds roughly to the present parish of Llanfihangell Tal-y-Llyn to the west. This helps to confirm the presence of the kings of Brycheiniog in the area, and the Awst charter records the donation of his and his sons’ bodies to the church for burial, implying that Llangorse church could be a royal burial site.

Such historical sources suggest that the Llangorse crannog was a royal residence of the kings of Brycheiniog.

If the Llangorse crannog is a late ninth/tenth century royal settlement, its identification is of major importance to Welsh archaeology. Except for the rectilinear enclosure at Cwrt Llechrhyd in Powys (Musson & Spurgeon 1988) and a few radiocarbon-dated re-occupations of earlier sites, there are no excavated settlements in Wales in the period from c. AD 700 to 1100 (Edwards & Lane 1988, 4-10).

From a methodological point of view, the project is providing a unique opportunity to combine archaeological techniques that have usually been confined either to dry land archaeology, or underwater archaeology. Many will have applications further afield beyond British waters.
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7. Detail of the vertical post-and wattle revetment behind the eastern palisade line of the crannog (photo: National Museum of Wales).

8. Llangorse Lake, indicating early estate boundaries, crannog and position of early logboat find (courtesy of A. Lane and E. Campbell).
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**Fig. 3**
SOME UNIDENTIFIED OBJECTS DISCOVERED FROM THE RUVANVALI-SAYA PREMISES, ANURADHAPURA

By

Gunapala Senadeera

The theme of this lecture is based on three sculptured figures to be seen in the premises of the Ruvanvali-saya. Out of them, one appears as an engraving on an old slab lying inlaid in the sala-patra-maluwa ('stone - slab - terrace') of this stupa while the other two are to be seen sculptured in shallow relief on an old lime-stone fragmentary column lying together with others in a similar state of neglect, unnoticed of and unattended to in a corner of the same site.

The first figure, though appears on a much weather-beaten and worn-out ancient slab with a net-work of cracks due to excessive weathering appearing on its face, is still clear enough for its identification. It is a rectangular slab measuring roughly 2 ft. x 3 ft. that would have once served as a member adorning an ancient Vahalkada the existence of which could only be hypothesized by the presence of a few similar pieces of architectural remains at the site referred to.

However, it has to be stated that the three objects referred to do not appear to be contemporary. The figure on the slab would go back to a pre-Christian date, probably to the very early period of Buddhism since its introduction to the land, and would have then served as a votive object when the person of the Tathagata was not to be represented, as a rule, by an anthropomorphized image and he was to be worshiped only in the form of a representative symbol.

The two latter objects, judging from the kind of stone used and the extent of wearing out together with other historical factors to be taken into account could be treated as falling on to a period between the 2nd and the 4th cent. A.D. When the limestone was used for the first time in this land for sculptural work - a period that corresponds with the glorious era marked by the remarkable works of sculpture of Amaravati and Nagarjunikonda fame.

The figure that appears on the surface of the slab referred to above is popularly known to the Indologists as the ‘Triratna’ on account of their general belief that it
symbolizes the Buddhist Tria, i.e. the Buddha, the Dhamma and the Sangha. Among them, Col. Maisey \(^1\) and Col. Cunningham \(^2\) prefer to call it the ‘Triratna’ while Sir John Marshall, \(^3\) Foucher, \(^4\) Benjamin Rowland \(^5\) and Hienrich Zimmer \(^6\) refer to it as Nandipada or Taurine. Meanwhile Bournouf \(^7\) identifies it with Vardhamana while Ananda Coomaraswamy \(^8\) calls it the ‘Trisula in Buddhism, and adds that the designation Taurine employed by some European scholars is the best terminology available to name the symbol. However, he does not give any reason for his opinion.

The ‘Triratna’ symbol to be seen in the Ruvanvali-saya premises is a sort of tridental object mounted on a plain disc which, again, is surmounted by a short stand with two leaf-like formations projecting from the point of tangency on either side between the base of the trident and the disc. From the same point on either side is issued a roll-like object, each reaching the bottom of the figure on both sides with rolled up ends.

The fragmentary column which we referred to earlier as an object to be seen in the same premises bears on its face two sculptured figures in shallow relief and they are different from each other in respect of their appearance. The one which appears on the face of its front elevation bears resemblance to the ‘Triratna’ in its more stylized form. The Chattrra that crowns it signifies the eminent position accorded to it. In this case the whole object is hoisted on the point of a spear fitted to a tall shaft. The other object which appears on the side elevation of the stele possesses a likeness to the symbol that remains enclosed by the two flanking arms of the ‘Triratna’ to be seen on the summit of the eastern gate-way at Sanchi. The Sanchi figure which bears an appearance similar to the pattern of a shield, as was observed by E.L. Johnston, has been recognized by Coomaraswamy as sri-vatsa the likeness of which appears on the breast of Vardhamana Mahavira. The Ruvanvaliseya object like the ‘Triratna’ with which it is placed in juxtaposition on the stelae referred to is crowned equally by a chatta denoting its supremacy. It is also supported by a spear which issues from a purna - ghata (‘brimming vessel’) placed at the base of the complex.

Out of the Indian examples of ‘Triratna’ as isolated units, there are only two units that remain in a good state of preservation. While one of them appears on the crest of the eastern gate-way at Sanchi the other which is partly damaged, appears on the northern gate-way at the same site. However, we have at Sanchi several
examples of it, in sculptural relief remaining in a good state of preservation. The other examples on relief are found among the sculptural remains particularly in Bharhut, Bodhgaya and Amaravati. Out of them, the examples from Amaravati, referred to earlier, are of special importance.

A little more description may be necessary in respect of some of the Indian examples as it will enable us to evaluate the importance of its Sri Lankan parallels.

In Buddhist art, the ‘Triratna’ is available at least in three types, each having one or two features varying from those of the others. However, these variations are not of serious proportions, and as such, they are practically identical with regard to their essential features.

Every ‘Triratna’, as a rule, has a tridental object mounted on a floral disc with two leaf-like formations projecting from the point of tangency on either side between the ‘Triratna’ and the disc. In almost all the Sanchi examples the middle prong of the trident terminates at a lower point, and in several cases, it supports another object mounted on it while being enclosed by the two arms of the Triratna, thus making the latter a composite symbol. However, this is not the case with other ‘Triratna’ symbols that are in relief at the same site. In them, the middle prong of the symbol or, to put it more realistically, the central cusp, terminates at a lower level without an additional object placed over it. In the example from Amaravati this middle member of the symbol has nothing mounted on it, and it terminates at a higher level as shown in a decorative frieze discovered from the same premises. Same is the case with the Sri Lankan example to be seen at the Ruvanvali - saya premises in Anuradhapura which forms the basis for our discussion.

The ‘Triratna’ seen on the summit of the gateway at Sanchi, is mounted on a short stand, the base of which is composed of a three-tiered pedestal. This symbolic complex is served by a male chowrie-bearer, probably a yaksa of the pre-Buddhistic type. In this respect sculptural representations are more interesting as they certainly represent a Buddha, Either the Buddha Gotama of the present Kalpa or another Buddha belonging to the body of 28. Thus we have Buddha Gotama represented by a ‘Triratna’ appearing in a panel of sculpture from Bharhut showing His enlightenment at the sacred Bodhi Tree. Here the ‘Triratna’ that symbolized the Buddha is installed on a plain stone-seat representing the Vajrasana. In this
particular case the symbol consists of a *Triratna* mounted on a floral disc with two leaves, each projecting out from its point of tangency between the disc and the *Triratna* which looks like a twin-armed bracket.

We have another panel from Sanchi in which the *Triratna* is represented in a triplet. Like the former representation, this triplet too is seen installed on a *Vajrasana* at the base of a *Bodhisharana* which provides protection to the Bodhitree. It is not clear here whether the triple symbol represent the Buddhist Triad viz. Buddha, Dhamma and the Sangha, or it is just a tripplication of the Buddha Himself.

A panel of sculpture discovered from Bharhat is of particular interest as it offers some features which lead to the identification of their parallels observable on the helmet of the Samurai—a subject which will be discussed later, (Fig.41) It is mounted on a floral disc which is supported by a short stand the surface of which is partitioned into several compartments. Each compartment has a line of beads in laid on its back. Besides, it is canopied by an umbrella which, being an important article belonging to the royal insignia of the ancient Indian world signifying supremacy of anything associated with it. Besides, garlands are hanging from each termination suggesting, again, the very eminent position it holds. A legend inscribed at the bottom of the panel in pre-Christian Brahmi characters describe the the scene as the Bodhi of the Vessabhu Buddha. The Bodhi tree shown here is a *sala* tree tallying with the account given in Buddhist literature in respect of this particular Buddha. Thus we are left with the impression that the *Triratna* in this case represent the person of Vessabhu Buddha. This is further strengthened by the fact that it is worshipped by a man and woman, certainly a husband and his wife who are kneeling on either side of the *Vajrasana* the surface of which is laid with garlands as well as flowers.

Then there are examples of the *Triratna*, also from Sanchi, but with less elaboration, occupying an eminent position. We have another example with an ornamented body, mounted on the floral disc as usual. It is made to perform an important function in that it supports a *Dhamma-cakka*, which is another very important symbol, employed to represent the Buddha during the era prior to the introduction of the Buddha-image.

From Amravati too we have an example of a ‘Triratna’ sculptured in shallow
relief. Its design is elaborately executed and the termination of each arm comprises a trefoil which is very close in appearance to fleur-de-lis of the west. Its floral disc is fully occupied by a closely-knit elaborate ornament.

We have also from Amaravati, as we said earlier, representation of the ‘Triratnas’ depicted in shallow relief on the hind part of the sole of the Buddha’s foot, and it is usually flanked by two auspicious symbols. In one example it is flanked by a svastika. The svastika has a very long history as an auspicious sign of very high eminence throughout the ancient world, and the fact that it was employed here to flank the ‘Triratna’ suggests, the eminent position it held as a symbol of auspicious character.

Let us now consider the various designations suggested by the Indologists to be applied to this symbol. They are: the Triratna or the Buddhist Triad, Nandipada, Taurine, Buddhist Trisula and Vardhamana. Let us take the first one, viz. the Triratna or the Buddhist Triad. As we have said earlier, Col. Cunningham¹ and Col. Meisey² being the two eminent archaeologista who conducted excavation and restoration work on the Sanchi stupa, are foremost among others who favour this terminology. However, those who are not agreeable to this porposition point out that the Triratna is not qualified in this respect to represent the Buddhist Triad as it does not possess three prongs. As we have shown earlier, the middle prong of some of the examples is taller than its flankers while the same of some others is shorter. For the first catetgory, we can cite some Andhra examples as well as the Ruvanvali-saya example.

However, in the case of the Triple-gem the three- ratnas i.e. Buddha, Dhamma and the Sangha are being considered to be of equal standing and one ratna, is not deemed to be higher or lower in their rank or significance. Therefore we are confronted with the difficulty in applying this symbol to represent the Buddhist Triad. There could hardly be any reason for one of them, the middle prong in this particular case, to be differently treated or represented, for we do not find, any canonical support for such descrimination for the Buddhist ‘Triplegem’.

Besides, a careful examination of the design of this object would reveal, that the middle member of this symbol is not another prong, but a mere cusp resulted in by the meeting of the lower ends of the two converging brackets.
Then comes, the next designation i.e. Nandipada or taurine favoured by Sir John Marshall, Fourcher, Benjamin Rowland and Henrich Zimmer who are all distinguished Indologists. Nandipada literally means Nandi's foot or track. It is well-known that Nandi is the name of the bull of Siva, used as his vehicle. The name Nandipada is derived from a small Brahmi inscription that appears beside a symbol engraved in old Brahmi characters on the Padana hill near Bombay. The Brahmi inscription reads as Nandi-pa-am which is equivalent to Skt. Nandipadam.

In addition to this symbol, there are in close proximity to it some clear-cut hoof-marks on the rock. Because of this Coomaraswamy has already raised doubts, as to whether the designation Nandi-pa-am is applied to the symbol in question or to the hoof-marks visible nearby.

While the term Nandipadam or Namdi-pa-am is not found elsewhere it is found inscribed here in Maharastri Prakrit which is an ancient dialect going back to a period prior to the Christian era. However, whilst being confronted with the uncertainty pointed out by Coomaraswamy, it is easy to observe that the engraved figure concerned, bears fair resemblance, at least in their essentials, to the symbol seen on the gate-ways of Sanchi as well as the one to be seen in the Ruvanveli-saya premises.

Although the Nandipada on the Padana hill is not as impressive and aesthetic as the Sanchi example, yet the two symbols agree on essential points, in spite of the apparent deviations in their details. The middle member of the Nandipada is of a horn-shape, and is mounted on a round body from the two sides of which project two arms, each terminating in a sprout-like formation closer in appearance to a tre-foil. In this regard we may compare this with the terminations of the arms of the Triratna of Anuradhapura variety which is our present concern.

One notable feature is the somewhat round body seen in the centre of the Nandipada. Although this is not regular in its shape it has the shape of a round seed with some marks of cracks. The whole symbol remains unadorned, and the open lotus which we see in the floral disc of the Triratna is totally absent here.

On the whole, it appears to my mind not so much as the hoof - marks of a bull called Nandi in this particular case, but as a crude - if not
primitive-representation of an artistic stylization of the process of germination of a plant with the seed at the base, the pair of cotyledons, two young shoots and the central sprout, hence manifesting a vegetation symbol in its essence.

When a symbol is formed all the natural features of the object on which it is based, are not incorporated in it. Only the striking features which the original designer would regard, as important to his mind, would be adopted.

The details given above appear to be providing a satisfactory basis for the terminology proposed by Burnouf\(^8\) i.e. \textit{Vardhamana} which means \textit{something in the process of growing}. However, it was not acceptable to other scholars because its proposer did not give a convincing explanation for his suggestion. Meanwhile Ananda Coomaraswamy\(^10\) calls it ‘Trisula’ in Buddhism and adds that the designation Taurine employed by some European scholars is the best terminology available to name as symbol.

The term \textit{vardhamana} occurs in several places of our Buddhist literature as well as Jain literature, but no where it was applied to one particular object thus making its proper identity extremely difficult. This inconsistency is due to the fact that the term \textit{Vardhamana} as will be shown by Sanskrit Dictionaries, has various shades of meaning. This situation has rendered it to remain its identification unestablished. The word \textit{Vardhamana} is derived from the Skt. root \textit{Vrdh} to grow. But this word appears to have been applied to a widely diffused concept regarding which very little research has been made. Its implications are large and extensive covering an entire phase of a civilization, and I am afraid I would require another lecture to do even little justice in the way of its identification.

In western terminology the symbol resembling a pair of antlers mounted on a circlet is called Taurine or Taurus represented pictorially by a bull’s fore-quarters. This zodiacal constellation presents a combination of two clusters of stars named Pleiades and Hyades respectively. In astronomy, it is represented by a bull- head with Hyads that takes the V shape surmounting the Pleides of a somewhat circular shape. The constellation of Taurus plays an important part in the calendar of the primitive peoples both in the northern and the southern hemispheres. Among them are included the Australian aborigines, the Omagna Indians of Brazil, the Indians of Peru and the Masa of East Africa. They all treat this constellation as a giver of

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rain which brings prosperity to them, and celebrate its appearance in the firmament. It thus shows its connection with the cult known to the west as the Fertility cult practiced by the ancient civilizations of the world. The belief of Taurus may have been adopted by them at a very early date of their history with modifications and interpretations to suit their respective individualities and ethnic interests.

Probably it is the semi-anthropomorphized form of Taurine which appears in shallow relief on a terra-cotta seal discovered by Col. Mackey from Harappa of the Indus Valley. What is shown on this seal, according to all scholars is a three-faced god seated in a typical yogic posture, with legs crossed beneath him. He wears a head-gear as it were, fitted with two horns which are very similar to those of a buffalo. Also he is surrounded by several animals among which one finds the figures of three animals well known to us, viz, the elephant, the lion and the bull. The absence of the horse is attributed to the non-existence of this beast in the contemporary Indus. However, a careful examination of the head of this divinity would reveal to one that he possesses a bovine face, although the Indologists are unanimous that it represents the head of the so-called proto-type Siva.

The belief that the so-called proto-type siva had three faces to be seen on the Indus seal appears to be a misconception. A careful scrutiny of the head of this figure would reveal to one that it has only one face—the face of a buffalo. Its long and slouching ears which are typical of the species of this animal, show their tips half-way down, the respective side of the face, and would, at first sight, mistake them to be, the cross-view of another human face. One more point. It is the usual practice to give a human appearance to gods—at least to their face. Contrary to this general practice, the nose of this divinity cor never be regarded as anthropomorphic. Here the very-long nose ends up at the lower extreme of the face without showing the chin, and it is the case with the face of a bull or a buffalo.

The association of the bull with the rain-cult goes back to a very remote period of the ancient world. In Sumerian art, the weather god of the Hittites is represented as driving a primitive chariot drawn by the bulls over the heads of personified mountains. There, the weather god was often represented in the form of a bull as is illustrated in the relief found at Alaja Huyuk. In another relief showing a shrine room the figure of a squatting bull is depicted right behind the empty altar. Throughout the Roman empire, the weather god standing on the bull became
well-known under the name of Jupiter Dolichenus (Skt. Dyupati) who holds the thunderbolt (Vajra of Indra) in his right hand while a trisula in the left. The bull-head has played an important role in the formation of some dragon figures of the east too. In these examples the head of the dragon or the makara appears to have been modelled out of the head of a bull in rut.

The fact that the figure of the bull was used as a symbol of fertility in the pre-Vedic period is proved by the figure of the humped bull discovered from the Indus Valley. Thus the proto-type siva with the the fore-quarters of the buffalo as his head appears as a symbol of this ancient concept. Interestingly an ornament designed with an actual pair of horns of a wild buffalo (Sinhala: madaya) fitted to an artificial head of the respective beast carved out of wood used to be displayed as an ornament on the wall of the verandah of some houses in Sri Lanka until recent times before they came under the western impact. Still more popular practice in the island, which is continued upto date in some remote areas is to adorn the walls of their verandah or the parlour with a similar ornament composed of a pair of antlers of stag or deer. This ornament with its bay-antlers and tips branched into tines offers a closer appearance to that of the Nandipada on the Padana hill or to the fore-quarters of the so-called proto-type Siva appearing on the Indus seal. It may be added that this concept is not out lived even in the west. For an example, we would like to live the (illustration from the entrance-door in a chateau called Bucholoi in chechoslovakia).

It is true that these figures are being used as mere wall-ornaments by most of these homes as their erstwhile significance is totally unknown to the occupants. To most of the present generation they may appear as some old-fashioned hat-hangers or cloth-hangers of some archaic interest. Yet to the unsophisticated villager in remote rural areas these antiques are some serious objects worthy of respect with an ancient tradition which he is unable to explain.

It may be interesting here, as to why a figure with horns happened to be chosen for a symbol to represent either the Taurine or the prototype Siva in preference to any other more popular object such as a plant, flower or fruit. As we know, the horn on the head of an animal continues to grow, and is so strong that it has a long survival even after death of its original possessor. Contrary to this nature of the horn, the plant is weak and will perish once it reaches its maturity. However, in later times we
see these attributes being shifted regardless of their weakmat to a form of ‘Triratna’ modelled out of vegetative elements. The type of the Triratna to be seen in a frieze in a sculptured panel from Nagarjunikonda could be regarded as representative of the stage, in which this transition was taking place.

The Triratna appearing in this frieze is characteristic of a plant bearing an open flower. It is important to note that the kind of flower seen in this representation appears to be a sun-flower known in Sri Lanka as Surya kanta which is believed to be bearing a strange reaction to the sun-rise. Besides, the two leaves shown on either side of the sun - flower are recognizable as those belonging to this particular plant, while the sun-flower gives a pictorial representation of the sun’s disc its deeply yellowish colour goes well in accord with the traditional colour in which the sun is represented in art. Not only does its flowering coincide with the rise of the sun, the flower so opened faces the sun’s direction too. This nature of the sun-flower may have inspired the designers of this particular Triratna frieze to have chosen it as an adequate solar representation to be used in this piece of art. It is possible that this composition of the sun and the Triratna served as the most important fertility symbol representing the concept of growth during the early centuries of the Christian era. When the Andhra culture saw its zenith.

Besides, the ‘Triratna’ symbol appearing in this frieze is seen surmounted on a three-tiered cushion-like object. It is possible that this is an imitation of an actual Triratna which served during this age as an ornament as well as an auspicious object which was supposed to bring forth luck to its adorers. It may be worthwhile to mention here that the Japanese helmet of the Samurai which appears to be having a connection with the Triratna is usually surmounted on a red-coloured cushion worked out with precious gold embroidery.

It is now time that we address our mind on the important issue of finding out the name applied to this symbol in Sri Lanka. As we know, this symbol remained unknown to the Buddhists of this country for a long period of time, and it is natural that its name too remained lost in our usage. However, there is a little clue available in the Dhampiya-atuwa-getapadaya written in the Ioth century.

This work which is the oldest available literary work in sinhala is accepted as an authoritative work helpful in determining the implications of many sinhala terms
which have gone into oblivion or unintelligibility. While explaining the term kunta which appears in the Pali Dhammapadamathaka-katha its author says that it is ‘dvi-suci’ kunta nam dvi suci ya meaning that Kunta is an object with two prongs. But we are not told about its shape. The only difficulty in applying this description to the so-called ‘Triratna’ is that, the Kunta described by our royal author, possesses only two prongs while the former is supposed to possess three. We have earlier explained this as a misconception on the part of some indologists who took the middle cusp as another prong or suci.

The name konta is synonymous with konta in the Sinhala language and the author of the Vamsatthappakasini uses the latter form in explaining the word Kunta used in the text of the Mahavamsa while dealing with the events that led to the construction of the Mirisavetiya stupa in Anuradhapura by king Dutthagamini. This shows that at the time when the Chronicler Commentary was being compiled, probably in the 12th cent. A.D. the usage in vogue was konta and not kunta. Besides, the king is said to have carried on this occasion some relics of the Buddha inside the kunta a fact which shows that a part of this object probably its shaft had a hollow in it, thus serving itself as a carrier of sacred objects - partly a reason for its being held as sacred too. It further supports our conjecture that the kunta was treated in Sri Lanka as a standard of high esteem carried at the head of the processions and never as a weapon to be used in warfare.

If the kunta referred to in the story of the Mirisaveti-seya could be regarded as ‘two-pronged’ in the light of the explanation by the author of the Dhampiya-atuwa-getapadaya it could safely be presumed that it is identical with the ‘Triratna’ of our concern. Again it becomes clear that both designations viz.‘Triratna’ and Buddhist Triad have no logical support, and apparently the terminology suggested by most of the indologists - that is Taurine - has a reasonable basis. In spite of this erroneous position the name ‘Triratna’ will be used throughout this talk for easy reference.

The story of the Mirisaveti-seya construction relates how king Dutthagamani had gone to Tisaveva in a procession with the kunta at its head for the festival of water sports to mark the conclusion of victory celebrations, and on his way to have had the kunta installed on the spot, where the present Mirisavetiya stands. On his return to the city after the festival, his men are reported to have been unable remove
this kunta from the spot where it was planted whereupon he decided to erect the present stupa by enclosing it. This story indicates the ancient practice of adopting the kunta as a royal standard (a sort of a mace) in Sri Lanka state functions as well as ceremonial functions. Many are references in Sri Lankan classical literature to royal processions at the head of which a kunta, konta or jaya-konta was carried as a standard of high esteem.

This has formed a long tradition and it is still the practice in Sri Lanka where two spear-like objects called kundayudhas or rayudhas, each with a long pointed blade (representing the middle cusp of the ‘Triratna’) flanked by two short backers the tip of each forming itself into a small half volute reminiscent of the two arms of the ‘Triratna’ or Taurine are carried at the head of ceremonial processions.

It is interesting to note that these kundayudhas are always accompanied by two large floral discs called SESATA fitted to a tall shaft. The design of this object resembles roughly the arrangement of the petals incorporated in the floral disc of the ‘Triratna’ symbol. As a rule, two kundayudhas are carried in these ceremonies, probably to represent the two arms of the ‘Triratna’. In this set the Sesata represents the Triratna’s floral disc which in turn represents the sun.

In this connection, a sculpture on the eastern gateway of the main stupa at Sanchi is of considerable interest. It depicts two elephants, each fastened to the other by its body, carrying a flag attached to a double-pronged kunta, (very similar in appearance to the Triratna) mounted on a long shaft. This may be compared with a parallel practice in the days of early Romans who used to carry a multi-pronged weapon at the head of their victory parades.

With the rise of Mahayanaism in India the Triratna began to play a predominant role as a powerful votive object. It assumed its new designation, i.e. Vajra which means, among other things, ‘adamantine’, and its name as well as its form occupied every arena of the religion as well as philosophy advocated by Mahayanaism. It became the most sacred object held by the hand of the Bodhisattvas, their Patnis and all incarnations associated with them. To cite some examples from Sri Lanka we have the colossal Bodhisattva figures in Budunwawala, as well as the much disputed Kustarajagala carrying a vajra which is a three-pronged object in their hand. It appears, by now, the ‘Triratna’ got standardised with three prongs converting its
middle cusp into a full-fledged thong. The Vajra was not out of bounds even to edifices belonging to the Mahavihara as is shown by the Vajra pillars of the ruined edifice standing near the Thuparama.

It was this Triratna-Vajra that was later introduced to China and Japan through Mahayanism. It is probably some features of this Triratna Vajra that have gone to form the design of the helmet of the Samurai, particularly, the type obtaining in the medieval times.

It can hardly be regarded as a coincidence when we see a mixture of features being present on this important national article of Japan.

We have in this, some features pertaining to the proto-type Siva depicted by the famous Indus seal belonging to the 3rd millenium B.C. and others pertaining to the ‘Triratna’ belonging to the 3rd cent. B.C. in one and the same object.

Appearing on the crest of this head-gear is a mythical animal composed of bovine, Crocodilian and piscine features. It has the head of a bull in its natural form even with the cord set through its nose-trils, thus making its identity as Taurus easy. The rest of this figurine is composed of the mythical animal generally known in India as makara (dragon of Indian type). Its crocodilian trunk has the features of a fish being the characteristic feature of the Indian makara. Its piscine tail is easily recognizable. However, the tiny horns that appear on the bovine head of this figurine are similar to the antlers of a deer and not to those of a bull. Each antler consists of one bay antler. The pattern of this part of the head-gear, appears to be an improved descendent of the primitive head gear worn by the proto-type Siva we have referred to earlier as to be seen on the Indus seal from Harappa which may have given origin to many other symbolic representations.

As we see, the most prominent feature of the Japanese head-gear is, the presence of the two horn-like formations, make to flank the bovine dragon. They are made of metal and are guilt, as a rule, while the edges of their jagged blades give, in some examples, a silver or steel finish suggesting sharpness, characterizing its vajra quality. These horn-like projections may be compared with the Triratna, example that appears on a sculpture discovered from Bharhut, The Bharhut example of the 'Triratna' as we said earlier, has been employed to represent
the Vessabhu Buddha.

In the Bharhut model, the 'Triratna' is mounted on a disc fully occupied by an open flower and the parallel to this can be seen on the crest of the Japanese cap which is occupied by a similar floral design set in a disc. You will observe that there are two leaf-like projections on the Buddhist symbol. Parallel to this we are on the Japanese helmet two rectangular objects with an appearance of two cut - diamonds-probably keeping with the Vajra aspect of a later date. As we see, the 'Triratna' together with its floral disc is mounted on a stand of conical shape. The exterior of this stand is seen partitioned vertically, and each compartment has a verticle line of tiny round objects similar to beads in shape. Interestingly the back of the cap of the head - hear of Sanurai too is divided into several compartments with gems or artificial stones of green, red, and amber colours in laid in a straight line. set in a straight line .

Then, the 'Triratna' example discovered from Nagarjunikonda shows that it is placed on a support which looks like a three-tiered cushion. The Japanese helmet, as a rule, is placed on a cushion covered with red silk (velvet) and decorated with rich embroidery worked in gold thread. In short, the Japanese helmet, apart from its being the traditional head-gear worn by the Japanese war-lords, is treated as a very eminent national symbol. One whole department in the Historical Museum of Tokyo is set apart for the exhibition of its various models. My study of this eminent object was made partly at this museum and partly in the office of the Ministry of Education, Sri Lanka, which keeps an example of it as a gift received from a Good-will Mission of the Japanese youth.

It is admitted that one would not get the complete visual likeness of the 'Triratna' on the Japanese object particularly, its elevation view. However, the similarity of the features described above cannot easily be dismissed as a mere coincidence.

Lastly, I would like to say that there is no other symbol in Buddhist art which has drawn the attention of the Indologists as much as the 'Triratna' during the past ten decades. Various theories, mostly with wide range of divergence, have been put forward towards its identification and interpretation, and yet no final decision had hitherto been reached. However, its role, as the most dynamic symbol, contributing
to the idea of vigorous growth ensuring well-being in general and attendant prosperity throughout the period of historic civilization of the world remains unchallenged.
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THE STANDING STATUE AT THE GAL-VIHARA
(UTTARARAMAYA), POLONNARUWA

By
Gunapala Senadeera

Several theories have been presented in the way of identification of the standing statue to be seen at the Gal-Vihara premises in Polonnaruwa. These theories can be divided, as they appear from the very beginning of this controversy, into two distinctive categories of thought. The scholars of the first group are of opinion that the statue concerned is of Ananda, cousin, disciple and favourite attendant monk of the Buddha, who was also reputed to have acted as the ‘keeper of the Dhamma’ (Dharma-bhandagarika) of the great teacher. Then, the view of the other group is that the statue concerned represents the Buddha and Buddha alone.

However the popular Buddhist tradition has always been in favour of the earlier view, viz. that it represents Ananda who grieves over the passing away of his Master. The supporters of this view take the sorrowful expression marked on the face of this statue as well as the position of the two hands crossed over the breast into consideration in making their decision.

The British scholars of the past century such as Liet. Fagan, Major Forbes, Sirr and Emerson Tennent were unanimous in their identification of the statue with the Buddha, and the first dissident on the British side was S. M. Burrows who, as early as 1855 A.D.: put it down on record in his Buried Cities of Ceylon that the statue referred to belongs to Ananda. H. C. P. Bell¹ who agreed with Burrows in this issue identified the nipanna-patima (recumbent statue) to be seen in the adjoining grotto with the Buddha in his state of parinibbana. Meanwhile, both A. M. Hocart and Senarat Paranavitana positively rejected the later theory attributing the identity of the statue to Ananda. Since these observations of the pioneers several scholars have made valuable contributions on the subject, among which those of D. T. Devendra, P. E. Fernando and L. Prematillake have drawn serious attention of the students of history and art here as well as abroad.

Before one could assess the validity of arguments of the scholars referred to above, it becomes necessary to take an account of the statues that belong to the
Gal-Vihara complex.

There are four statues carved on a living rock at the Gal-Vihara, namely, two seated statues, one standing and the other recumbent. Out of them three statues are of the colossal type while the other which is seen in a specially engraved grotto referred to in the Mahavamsa by the name Vijjadhara-lena is smaller in size. Also the last referred to is much symmetrical and ranks higher in aesthetic qualities. On the whole the statues of this shrine, according to Prof. Paranavitana, possess some facial features that are not present in any of the Buddha statues found anywhere in the land. 'He recognizes the standing statue as a representation of the Buddha in the attitude of paradukka-dukkita, i.e. 'He who is sorrowful for the sorrow of others'.

The arguments of Hocart are chiefly based on the presumption that the statue concerned was originally housed in a separate chamber. Says he:

'The theory that the standing statue at Gal-Vihara, Polonnaruwa is Ananda weeping over the dying Buddha has so caught the popular imagination that it has become almost an article of faith. The archaeologists, however, owes allegiance to facts, and not to sentiment, and the facts are that the standing and the recumbent figures were each enclosed in separate houses. The base of the wall between them can still be traced, though it is gradually decaying... much has been made of the pathetic expression of the standing figure. I regret to say it is the effect of weathering. The figure is simply standing Buddha one of the three positions in which he is represented.'

Then we turn to Prof. P. E. Fernando. He observes in these statues 'the presence of two distinctly marked facial types neither of which can be traced to an earlier period in the history of the Sinhalese sculpture...'...the face of the recumbent statue and that of the larger seated Buddha share similar features while the face of the seated statue in the excavated cave and that of the standing statue......... are invested with similar characteristics'.

'It would appear, he goes on to say, 'that in the two larger statues i.e. in the larger statue in the dhyana-mudra and in the recumbent statue, the sculptor has
employed a facial type appropriate to the larger dimensions of the statues while in
the two smaller statues the heads which are well modelled and delicately chiselled
impert to them a very attractive appearance. The facial type in the two smaller
statues has some affinity with the type found in some of the Buddha statues made
during the Pala period in Bihar and Bengal, and perhaps, in a small measure to that
found in some of the Buddha statues of the Gupta period.

The faces in the two larger statues are described by Fernando as having ‘faces
unusually round and details are seen in a somewhat flat surface resulting in a dull
and uninteresting expression. The noses of both statues are stiff and unnatural, and
the eyes are set rather high in the face. In the larger seated Buddha the latter
circumstance has reduced the breadth of the forehead.’

The validity of the observations made by P. E. Fernando would become clear
to any one who does a careful study of the facial features of the two statues referred
to. In addition to the narrow receding forehead one would notice smaller eyes, larger
nose, exaggerated cheeks, and smaller chin that can all be regarded as
impropriionate by the Indian as well as Sri Lankan standards of symmetry. It would
appear that these features are closer to what we normally describe as Mongolid than
to any other ethnic affinity known in Asia.

Professor Fernando who suggests that the sculptors who were responsible for
the creation of these two statues had Chinese models for their guidance. In support
of his conclusion he cites the full and round face which is characteristic of most of
the Chinese statues of the Buddha as well as the commercial and cultural contacts
that existed between Sri Lanka and China in the 12th century. The result of this, as
stated by him, would have been Tantric influence brought to bear through the
Vajrayana introduced to the island in the 9th century A.D.\(^6\)

The observations made by the scholars above-referred to are highly relevent
to the subject under discussion as they are helpful for the proper identification of
the two statues concerned, i.e. the recumbent and the standing. If the recumbent
statue were to be identified with one representing the lying posture of the Buddha,
as is taken by Hocart and Paranavitana, it goes well in accord with the Mahavamsa
which names it as a nipana-patima. One cannot reject the validity of observations
made by Hocart who draws our attention to the remains of the ancient wall that
would have enclosed the chamber which originally refers to have accommodated the standing statue under reference. If each of these two statues were to have been housed in two different chambers separated by a wall there would be no sense in the suggestion that Ananda here is grieving in his isolation over the demise of his Master. Then, if the two figures had been accommodated within the same chamber, as is the case in other places where the scene of the Buddha's passing away with Ananada present by the side is depicted it could have produced some effect, if not the desired effect. In such instances, it was the practice to have Ananda placed behind the feet of the Buddha. Even where he was placed near the head, it was behind his head, and not in front of it or adjacent to it. Besides, in all these instances Ananada was represented in much smaller physical size than that of the Master.

Mr. D. T. Devendra\textsuperscript{8} cites several Buddha statues, local and abroad, without curly hair on their head and tries to make a case in favour of his theory that it was not an essential feature of the Buddha's head. We admit his submission that there are several Buddha figures as the one found at Mankuvar. To this list we can add the Kartha Buddha, a Buddha statue found in Mathura, another in the police station at Sivakanchi- puram-all in India and those to be seen at the Vata-da-ge, Polonnaruwa, without this feature. In all these instances, the Buddha is represented, as Devendra says, with a head wearing a skull-cap. However, can we cite an instance from the ancient Buddhist art a disciple of the Buddha, particularly an unattained (\textit{puthujjana}) disciple, as was the case with Ananda on this occasion, with this special hair arrangement which was exclusive to the Buddha to be one of his auspicious physical characteristics? Even the padmasana, the 'lotus pedestal' on which most of the Buddha statues in the ancient Buddhist world were made to occupy by way of sitting or standing, had been exclusive to the Buddha. Thus, it appears that the features associated with the standing statue at the Gal-Vihara are as described above, going to stand in the way of its being identified with Ananda. On the other hand, the theory to the effect that the recumbent figure at the Gal-Vihara depicts nothing more than the lying posture of the Buddha appears to gain further support.

We have earlier referred to the observations made by Prof. Fernando on the Tantric influence which appears to have been brought to bear on the works in the Gal-Vihara. This too stands against the theory to the effect that the statues in the \textit{nippanna-patima-lena} is depicting the \textit{parinirvana scene}. It is commonly known that the Mahayanists do not accept the position that the Buddha was dead and gone for
ever. According to them it was the physical residue (nirmana-kaya) that has its appearance in the illusory (maya) world, and the sakyamuni in reality is enjoying the heavenly bliss in the Sukhayati. This belief of the Mahayanist compels him to discourage the practice of representing the Buddha in the parinirvana posture except where it becomes necessary to depict the events of his life in series. Therefore it becomes highly improbable to presume that the Vajrayanists would have ever wished to have a statue of the Buddha that depicts the stage of parinirvana. In other words, he does not want to perpetuate the memory that the Buddha.

In the event of identifying the nipanna-patima with the Buddha in the process of his concentration attitude while lying (sute) the standing statue which is seen adjacent to it has to be viewed in a context different from that of Ananda. As stated earlier, the early European scholars as well as Hocart and Paranavitana and lately, Prematillake⁹ totally rejected the theory which identifies the statue concerned with Ananda. Although all of them firmly believed that it represents none other than the Buddha there was no unanimity among them with regard to the explanation of the peculiar hand position to be seen across its breast.

Of them, Mr. Hocart¹⁰ explained his view in the simplest terms. Says he: 'The figure is simply standing Buddha, one of the three positions in which he is represented.'

Prof. Paranavitana¹¹ takes a step further and says:

'Much more satisfying aesthetically than these seated figures is the standing Buddha; 22ft. 9in. in height, with arms placed across the breast, and with a sorrowful expression in the countenance. This attitude of the hands in a Buddha image is known from two other examples, a rather battered figure to be seen at the Yatala dagaba at Tissamaharama, and a colossal image, said to be of wood, but now covered with plaster and paint in the largest cave at Dambulla. It is evident that the purpose of the sculptor, achieved with remarkable success, was to present the Buddha as para-oukkha-oukkhita, i.e. 'He who is sorrowing for the sorrow of others.'

While repudiating the earlier theory identifying the statue with Ananda Paranavitana clarifies his point further in a foot-note.¹²
'As late as 1905, Mr. S. M. Burrows in his 'Buried cities of Ceylon' states that this figure has generally been taken for a Buddha, but gives his reasons for taking it to be a representation of Ananda. This view, apparently propounded for the first time by Burrows, has now gained wide currency so much so that it is referred to by popular writers as a tradition, and has found ardent advocates to defend it. The indubitable fact that the standing image was originally inside a separate shrine disposes of the theory that it represents Ananda sorrowing at the passing away of the Buddha. The treatment of the hair is ringlets, appropriate only for a Buddha image, and the lotus pedestal, conclusively establish that the image is not of Ananda, but of the Buddha. At the parinibbana of the Master Ananda was not yet an arahat.'

However, Paranavitana's opinion that the statue concerned is depicting the para-dukkha-dukkhita attitude of the Buddha appears to have been made on the impression that this work of art imparts a 'sorrowful expression in the countenance.' This impression may have been the result of his considering the arrangement of the two hands as well as the facial expression of the statue to be producing a sorrowful effect.

Meanwhile Devendra who interpretes this posture (which he describes as particularly exclusive to Sri Lanka) to be expressing an attitude of 'respectful listening' or of submissiveness quotes instances of 'unsophisticated' Sinhala villager or the south Indian Tamil in Sri Lanka standing in this very attitude when he is before a superior.

It is unfortunate to observe that, all these scholars, save Prof.Preamatillake, do not appear to have given serious consideration to the unusual position in which these hands are crossing over the breast with their fingers stretched out just touching the arm. It is important to note that Devendra was at least able to recognize this difference between the hand - position of the 'unsophisticated villager' and that which one sees in the Gal-Vihara statue. He says that in the case of Gal-Vihara 'each hand is inserted underneath the upper arm opposite it - very close to the arm pits'. But he fails to notice of the fact that the fingers of the standing statue are stretched out in stiff form without leaving space between each other and are just resting on the arms over which they stretch. This is quite contrary to the position of the hands of an 'unsophisticated Sinhala villager or of a South Indian Tamil of the Sri Lankan variety, who is in the attitude of respectful listening or submissiveness. In the
position Devendra is referring to one is required to follow his fingers round the arm so as to suspend it. No man or woman who is either standing at ease or keeps standing in respectful or attentive listening would keep his or her crossing hands over the breast and closer to the arm-pits with fingers stiff and stretched out just to rest on the arms without a conscious effort to do so. In some cases, particularly in the case of the Sinhala Villager, the fingers (in a loose fist) of one arm go underneath the hollow of the other arm without being seen from outside.

Meanwhile, Prof. Prematillake\textsuperscript{14} who is closer to the proper identification of the statue of our concern cites many Buddha figures, in addition to those referred to by others earlier, with this unusual hand-position appearing in mural form at the cave shrines at Yapahuwa, Bambaragala, Madawela Vihara, Gangaramaya, Lankatillaka and several other places. He describes these Buddha figures to be depicting the \textit{animisa-locana-puja} performed by the Buddha in the second week after his enlightenment.

The word \textit{animisa-locana-puja} is formed by the combination of three words. Of this ‘\textit{animisa}’ means ‘non-winking’, \textit{locana} means ‘eyes’ and \textit{puja} means ‘offering’ or ‘oblation’. Therefore it denotes ‘an oblation conducted by way of non-winking or keeping the eyes open at the object receiving that offer. In this particular case, it was the trunk of the Bodhi tree on which the precious gaze was fixed.

However, there is one point even Prof. Prematillake appears to have not taken notice of. In all these cases referred to above by him the eyes of the Buddha are kept wide-open so as to make their glance aimed directly at the Bodhi tree. Disappointingly, this is not the case with the eyes of the standing statue at Polonnaruwa, that are half-closed and down-cast suggesting that their glance is aimed at an object down below. Then, the recipient object, the Bodhi tree in this case, should be seen at a level lower than that of the upper region of the body of the statue. It is not possible otherwise, for the sacred tree to have received this steady glance unless it was a tree of several feet in height. We cannot imagine the existence of any Bodhi tree of such proportions in front of this statue in the days of its execution or afterwards. It cannot even represent the historic \textit{animisa-locana-puja} performed by the Blessed one at the site of Bodhi-gaya. Thus the \textit{animisa-locana-puja} theory too suffers from lack of support.
Then we come to the inevitable query. What does this statue represent? The Sarva-darsana-samgraha refers to an asana called svastikasana while the Bala-Ramayana to a svastika-dana. In the svastikasana which is practised by the yogins in the course of their meditation, the toes are placed in the inner hollow of the knee so as to make a cross (svastika). In svastika-dana the hands are crossed over the breast. The Bala-Ramayana (75,16) refers to a woman with this hand-position by the descriptive term svahasta-svastikastani, i.e. 'the woman who makes a svastika over her breasts with her own hands. The svastika the history of which goes back to a very remote date of human civilization has always been considered a very lucky symbol, and the woman who appears with the hand-position referred to above has been described as offering a lucky sight with magical influence.

In the case of the ascetics who practice svastikadana as a very rigid yogic posture have to make a conscious effort to concentrate body and mind in the greatest measure of strictness. This yogic posture is achieved in the samadhi-patima which we see in the open-air at the site of the Gal-Vihara. Then comes the necessity for the svastika-dana (svastika-mudra) to be depicted by means of the medium of the standing statue, and it is achieved by its hands crossed over the breast with the fingers stretched out and just touching the arm.

Some explanation may become necessary for the 'sorrowful expression' many have referred to. Is it a sorrowful expression? The sort of expression worn by the face of this statue could better be explained as serious or ecstatic rather than to be 'sorrowful'- a condition resulted in by the mind overpowered by a dhyana.

Thus, we have at the Gal-Vihara, the three postures of the Buddha, namely, standing, seated, and lying, and in all these postures the Buddha is supposed to be practising a dhyana. The standing figure may be depicting, in a way, the walking posture (gati) or the camkamana posture of the Buddha. This conjecture of ours receives support from the two features present in this statue.

One would notice in this statue a slight bump or an exaggeration of the right thigh as well as the abhamga resulted by a slight bent of the knee in a forward direction. This is another unusual feature which has puzzled the archaeologists who were unable to explain so far. Are these features giving us a hint which is suggestive of a step about to be taken forward by the Buddha in the process of his cankamana?
Let us expand a little more what has just been said. We have just concluded that the statue under discussion could be considered as depicting a posture in which the Buddha is practising a dhyana while standing. Then it would be more reasonable to suggest that the Buddha is represented by this statue in the process of his practising a dhyana associated with the svastika-mudra while walking, and not when simply standing with his hands crossed over his breast. During this process one has to be adequately conscious (sampajana-kari) not to allow, among others, the svastika-mudra which is an essential requirement to be disturbed, and this effort will be conducive (adharaka) to the dhyana in progress.

Besides, the Mahayanists - more particularly - the Vajrayanists, used throughout the later period the Buddha image for their Tantric practices. They also laid great emphasis on the dhyana aspect as an essential feature of their ecclesiastical practice, and to them, the Buddha statue was not only an art object of worship, but also was an agent of auspiciousness. According to this concept, the Buddha statue with the svastika-mudra was considered as imparting a magical influence to the worshipper who always wished to achieve a double objective by his puja, viz. adoration and worldly happiness for him and his family.
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SRI LANKAN ARCHAEOLOGY (1890-1990)
AND ITS CONTRIBUTION TO HUMANISM AND CULTURE
By
M. A. M. Shukri

In this closing decade of the twentieth century, and on the threshold of the twenty first, despite the abundance of material culture and almost its democratisation around the world, mankind appears to have lost its sang-froid, and life at all levels appears to increase in abrasiveness. There is much anxiety bordering on panic in the learned reports and studied presentations by prestigious institutions and individuals on such kindred subjects as population explosion, ecological catastrophe, industrial waste and pollution of earth, air and water. But the most striking feature of the world we live in, is that most of us are cut off from a vision of the future. That, 'Life has no validity unless it can project toward the future.....' is as germane today, as when it was expressed towards the end of the last War by Albert Camus.¹ Man envisages the future by interpreting the present, with reference to the past. Therefore, a scientific understanding of the past becomes sine qua non for realistic alternatives to the future. More and more we know of our past and our origin and discern the variousness of cultures and civilizations, we are driven to the inescapable truth that humans, despite the diversity of cultural accomplishments, belong to one family. This perception cannot be arrived at by linear thinking which make us believe in the exclusive supremacy of technology to augment our material resources and bring about an equitable distribution of such products. It is here that archaeology comes in, generating a feeling of awe and reverence in our avenues to antiquity.

Archaeology as a scientific discipline is undoubtedly recent, but as an insatiable human curiosity to delve into man's past is an age-old endeavour. Hence, archaeology, at its present stage, as it has outgrown its antiquarian features and exclusive reliance on oral traditions and literary records has evolved a definite physiognomy with modern techniques and methodologies thereby basing our outlook on a scientific consideration. Accordingly, it has made a significant contribution to world culture and understanding among the peoples of the world.

Even the ancients, while digging for one reason or other, stumbled on artifacts of earlier men who preceded them, but no general conclusions were drawn to kindle interest in man's cultural ancestry. When interest in them really began, it was from
the antiquarians with a purely artistic angle of vision and was really a part of the humanist tradition of the Renaissance in Europe. Part of the revival of interest in Graeco-Roman antiquity was a concern with the art and architecture of the Greeks and Romans. Motivated partly by monetary considerations, pottery, sculpture, coins and other such artifacts were excavated and collected for reasons not altogether unmotivated by commercialism. Thus lamentably, the earlier nineteenth century expeditions by Europeans to Greece, Rome and the Near-East were mainly collecting expeditions. Archaeology begins to show early signs when the collector’s tradition begins to reveal a scholastic and academic tendency by which the artifacts came to be arranged, classified and chronologically determined to interpret past history.

Despite this philosophic orientation of the early humanists to an archaeological approach to man’s past it was restricted to Greece, Rome and to their provincial possessions and the Biblical lands. It was only towards the middle of the nineteenth century with European involvement in the Eastern Question which led to wars around Turkey, that the humanist tradition of being concerned with European cultural tradition began to spill over to the lands of Egypt, Mesopotamia, Anatolia and the Mediterranean isles. Earlier diggers were not patient and methodical enough to read the story of man as written in the earth. Not until the last few decades of the nineteenth century does systematic excavations begin to replace careless treasure hunts by antiquarians and aesthetes. To these early archaeological quests, as distinct from the purely humanist approaches of the Renaissance period belong Henrich Schliemann’s exploration in 1870 on Hissarlich for Homer’s Troy in Anatolia - present-day Turkey; Flinders Petrie’s excavations in Egypt in 1880 Sir Arthur Evans bringing to light the lost Minoan and Mycaenean civilizations of Crete and the mainland and Leonard Woolley’s expedition in the Chaldean city of Ur in present-day Iraq and so on. As the area of excavations expanded, a kind of professional snobbery which persisted in the early phase of archaeology began to dissipate and it became increasingly evident in European writings of a concern for MAN behind the artifacts. With this broad, detached and objective attitude, this branch of inquiry into man’s past began to acquire clarity and depth and to adopt scientific methods, measurable techniques and verifiable criteria.

With the extension of European activities in Asia in the 16th century and the
consolidation of their rule in the 19th, archaeological study itself is extended to Asia, mainly under the direction of the British and the French. With the archaeological exploration of the subcontinent and the Iranian tableland which includes Persia and Afghanistan it ceased to be a regional preoccupation and begins to acquire international significance. Its ever-widening perspective was, paralleled by an ever-increasing scientific configuration which made it reconstruct our history, especially ancient history and pre-history with a greater degree of exactitude and optimism. In earlier historiography there was much room for speculative probabilities as they were based on such sources as literary evidence, epigraphy, numismatics, and such kindred disciplines as philology, indology and iconographic symbolism, etc. Thus archaeology became progressively a reliable means of examining ancient cultures which have ceased to be, on the basis of artifacts until written records become profuse enough to be meaningful. But then certain problems come into focus when we find that the lithic records cease by the 3rd century before Christ in Sri Lanka or with the Asokan inscriptions in the subcontinent about the same period. Beyond these and the recorded evidence as contained in the Egyptian hieroglyphs and Mesopotamian cuneiform and the undeciphered scripts of other civilizations lies pre-history.

How can we understand the emergence of man as a tool-making and culture-bearing being? In the absence of records, how can we understand the origin of food production and the rise of village communities leading to urban living? How did civilization manifest itself monumentally in art, thought and religion? And finally, why and how did these ancient civilizations without exception come to an end? A serious hindrance to a comprehensive understanding of man’s past is of course, the incomplete state of the archaeological record. To expect the archaeological record to be fully complete, in a well-preserved condition and in context is to demand the impossible. There being no possibility of such completeness of record, the archaeologist’s role becomes challenging. ‘He has to be the combination of the scholar and the engineer, the man of languages and the man of physics and mathematics when such can be found.....’ In addition he has to be a man of insight and imagination with a scientific bent of mind to revise his image of the past in the light of new findings. Scientific truths are provisional, tentative and ever-growing. It is a ‘self-correcting system’, as Julian Huxley observes in The Humanist Frame. Final truths do not belong to this world. In as much as we have a changing vision of the heavens in astronomy so does our investigations in all fields...
of inquiry grow with the advance of science. Archaeology is no exception; accordingly it inheres in this quality of refining, modifying and developing its methodologies and techniques to command credence for its conclusions.

Archaeology in its mature phase, produced such a man in Vere Gordon Childe. An Australian who went to Oxford as a post-graduate student summarised the knowledge of pre-historic Europe in his *Dawn of European Civilization* (1925). This was followed by The Danube in Pre-history (1929). In these works he makes a remarkable statement about the aims, methods and limitations of archaeology. Childe would be remembered for his clever hypothetical attempts at a general synthesis of our knowledge of pre-history as disclosed by archaeological excavations. His, *Man Makes Himself* (1936) and *What Happened In History* (1942), portray his broad generalisations and his views of the neolithic and urban revolutions in human history. The assemblage of facts and ideas to fall in place, and to make them intelligible, it is necessary that we view them with a mental frame of reference. In other words, there is the need for a hypothesis, a theory or perspective as in the sciences, humanities and philosophies or religion. Accordingly, Childe attempted to explain the decline and disappearance of the Indus civilization, conceiving it as some sort of 'bourgeois democratic economy', with a Marxist flavour. (Gordon Childe, *New Light on the Most Ancient East*, Lond, 1934). But true to the scientific spirit he abandoned his hypothesis in the light of fresh evidence that were brought to light by Wheeler's excavations on the same site in 1950. This is just an instance which illustrates how archaeology has been developing over the years as a scientific discipline. He being aware of the limitations of archaeology, takes up this aspect in his *Social Revolution* (1951) "In favourable circumstances, archaeology can provide considerable evidence for framing a fairly adequate, though always incomplete picture, not only of technology but also, of the whole economy of a pre-historic society...."

Sri Lanka is indeed a small country. As an island it nestles in the Indian ocean at the southern tip of the Sub-continent of India, with an area of a little over 25,000 sq. miles and a population of about sixteen million. Yet, by its contribution to world culture through archaeology, she has made herself a great nation. Hence the Muslims, who constitute a segment of the Sri Lankan nation take great felicity in participating at this gathering to commemorate 100 years of archaeology in this country. Its antiquarian and archaeological pursuit which is really anterior to 1890,
and its official and systematic contribution to this field of inquiry by the Department of Archaeology and the numerous individual contributions have really compensated the dimunitive geographic magnitude and the physical invariants of Sri Lanka.

This country, by its archaeological surveys, excavations, conservations and by imaginative interpretations of her archaeological finds, aided by her literary evidence, epigraphy and numismatics continues to make noteworthy contributions by evaluating historiography in this country. For a small country such as ours, we have been singularly fortunate in our archaeological undertakings, as the Department of Archaeology, since its inception had men of industry, calibre, scholarship and dedication. These men with distinction and beauty have made our ancient heritage a living reality, thereby making a significant contribution to understand our past as archaeology elsewhere has rendered with respect to other civilizations.

Before archaeology began in all seriousness, antiquarians in Europe, based their knowledge of the ancients on the written records of the Biblical traditions and of the Jewish, and Graeco-Roman historians, travellers and geographers. Sri Lanka can take legitimate pride in the fact, that it put down in writing its oral traditions of a little over a millenium in the sixth century A.D. in the Mahavamsa, and has continued to record the history of the Šasana (Buddh. Church), her rulers and of the cultural life of the country up to the present time. Thus we have a conscious sense of history which is sustained by the chronicles; Dipavamsa, Mahavamsa and the Culavamsa. These literary sources have illumined the country’s ancient history, and much more, it even turned out to be a source of reference, particularly in determining chronology in the study of the ancient history of even the subcontinent.

Long before the dawn of science and human awakening which demanded an explanation of Man’s origin, his world and his destiny, man resorted to mythologies and legends woven around natural phenomena, historic events and personalities in the course of which arose their heroes and heroines endowed with an aroma of the supernatural. But when they are bleached of the supernatural flavour, the kernel of truth remains. And it is around such truths that poetic fancy and literary imagination churned the mind of our ancestors to evolve our traditions. This is what a study of philology, Indology and orientalism reveal, and are either confirmed or modified by archaeology, epigraphy and numismatics. And this country’s archaeologists and
those who are lured by it due to aesthetic or humanistic considerations should consider it a boon that they are fortified in their activities by the Pali Chronicles, which quite contrary to derisive aspersions have proved to be an invaluable guide under the surveillance of scientific and critical scholarship.

The recorded history of the Sinhala branch of the Vedic Aryans begins in this country with the advent of Vijaya and his seven hundred followers in 543 B.C, on the Mahavamsa version. And according to the orthodox traditionalist view this event coincides with the parinibbana of the Buddha. This Sri Lankan chronology pertaining to the passing away of the Buddha was held to be incorrect by Western scholars by some sixty years. In this connection, it is interesting to note, that Dr. Malalasekera in his doctoral dissertation, draws our attention to the researches in Indian epigraphy, particularly to the Kharavela Ins. found at Orissa which has furnished very strong evidence that the Buddha was a contemporary of both Bimbisara and Ajatasattu at 554 B.C. thus supporting the Mahavamsa date. This digression is not irrelevant to archaeological investigation, as a critical study of the Pali Chronicles and their usefulness to determine chronologies of events and to identify persons and places have made the writers of ancient history to revise their perspective of epics and chronicles which came to be recorded at a particular point in historic time of events that had been held orally for millenia. This ability of the ancients to commit to memory before the art of writing and writing materials were invented need not puzzle us, as the Vedic hymns after they reached their composite form post-1500 B.C. continued to be orally handed down up to 1500 A.D.; and the printed editions of the Vedas, we are apprised, towards as late as the nineteenth century were corrected from oral recitations of the vedas by the native students. They were found not only to repeat, but repeat with the proper accents and who were able on the basis of their memory to point out even the misprints in the printed editions.

Despite this plea in defence of oral traditions which now constitute recorded (oral) literary evidence it is fair indeed to expect them to be confirmed by other sources as they have their own limitations. Men often fail to tell the whole truth for a variety of reasons. Men have, many prejudices with which they are born or acquired. These prejudices and predilections can be minimised perhaps, but not eliminated altogether. Hence he may evaluate and record the events he witnesses through biased eyes even though he may be a good observer and a man of rectitude.
Or he may base his account on hearsay evidence passed on orally over a long period of time during which interpolations occur to embellish such accounts. Language again is another difficulty. Languages themselves evolve, and the same words acquire new meanings and develop very many nuances which were not originally meant by those words. Early historiographers, annalysts and chroniclers were unable to discern these obstacles that impede and sometimes obscure our understanding of the past as we see them in retrospect.

It was becoming increasingly apparent, that in order to advance our knowledge of our antiquity, excavations had to be undertaken - excavations not to fill museums to satiate the aesthetic consideration of the artist, or to fill the coffers of the antique seller, but to provide answers to many questions regarding man in ancient times. It is not the purpose of this monograph to trace the history of archaeology. But we are certainly entranced by the vistas that archaeology discloses to enrich our understanding of the past. How the archaeological discoveries and their interpretations have induced insightful reflections into our historic perspective and how its contribution to our cultural history has generated international understanding and goodwill are certainly matters that invite our attention.

The knowledge of man's ancestry - of his artifacts, his art and architecture, of his religious beliefs and culture had been a privilege in the past, of a leisured class. Even today, despite tremendous progress in universal literacy, communication and mass media and the general improvement of living conditions and an awareness, most men and women remain impervious to the findings of archaeology and are unresponsive to their imaginative interpretations. Most of us are not committed to archaeology in a professional sense to be involved in it technically or even to interpret its finding academically from whatever the perspective. Compared to most sciences and the humanities, archaeology, like psychology, by taking over modern techniques and methodologies has assumed the image of a scientific discipline. Hence as a science, it should be considered a baby science. As in the case of psychology and sociology, archaeology acquired a great respectability, intellectual forcefulness and social recognition because of the role of her pioneers. By their diligence and ingenuity, incisive insights and imaginative sweep, archaeology has inched its way to influence, modify and recast man's Weltanschauung. To this contribution of world archaeology, Sri Lanka has made its worthy contribution. Delving into our past through archaeology or into the mode of existence of our
pre-historic ancestors through palaeo-archaeology, drives home the indisputable truth of the commonality, oneness and the universality of man as a single species. Realisation of this fact is not a mere academic speculation but of practical importance to human survival. This is particularly relevant today, especially at a time when men around the world seem to have lost their equanimity, ostensibly on the basis of politics, economics, race, religion, language and what not, but in actual fact because he has forgotten his past and his origins. Archaeology both in Sri Lanka and abroad has enabled us, we believe, to retrace our avenues to antiquity.

All intellectual investigations in the related fields of art and literature, science and technology, philosophy and religion reveal the larger truth, that culture and civilization as we know them is neither the creation nor the exclusive monopoly of a single country, nation or people; and that it is the collective and continuous endeavour of human labour. In recent times, we have been looking to Europe not only for the acquisition of our material culture but also for most of our intellectual disciplines and scholarship not excluding the scientific discipline of archaeology. In the gradual and sustained effort of building the fabric of culture and civilization Europe has not always been the master, and we the pupil. Archaeological surveys, explorations, research and study bear witness to this fact. We find, how the river valley civilizations of Mesopotamia, Egypt, China and India inter-linked by land and sea infusing one another and perhaps through Minoan Crete and Anatolia lead to the growth of the Graeco-Roman civilization. After a brief spell of suspended vitality, it reaches a high point in the Saracenic civilization of Baghdad, Sicily and Spain, leading to the rebirth of learning or Renaissance in Europe heralding the modern era. Such a unitary picture in the birth and growth of culture and civilization today, appeal to reasonable minds because, archaeological investigations are based on viable scientific techniques which are verifiable. For well over a hundred years, archaeological development in this country, mainly under western scientific tradition, has progressed to make its own contribution to world culture and understanding.

Unlike the cultural life of a people as reflected in the ‘ideological superstructure’, which is always in a state of flux, its geophysical reality is relatively more stable, abiding and to a great extent determine the course of its cultural history. ‘The first step towards understanding of a nation’s past is to understand something of its geography’, Wheeler. While every fresh impulse that sprouted on the
sub-continent in the sphere of religion, language, literary and artistic traditions found their reflection in the culturallife of this country, yet our insularity enabled these elements of culture to evolve in an orientation best suited to our native genius. Most cultural ingredients that go to constitute the ethos of the majority of Sri Lankans had their genesis in the north of the subcontinent. This part of India which had been for millenia exposed to the ravages of invading hordes since the Aryans around 1,500 B.C., continued unabated. They were followed by the Persians in the sixth century B.C.; then by the Greeks in the fourth century. Down her mountain passes swept the partially Hellenised Scythians in the second century B.C. followed by the Parthians. Later, probably towards the first century of the Christian era descended the Kushans. The Ephtalites or White Huns and Yuh-We-chis who followed them from Central Asia, archaeological excavations reveal 11 put to fire and sword 'Taxila and its monasteries'. This was not to be the end of alien intrusion into North India. Muslim thrust into India begins with the Arab invasion of Sind and the Punjab in 711 A.D., followed by Afghans and Turks who established the Delhi sultanate. And the Moghuls inaugurate their rule after the battle of Panipat in 1526. 12 Thus it is meaningfully clear, why most of the elements of culture which in their advanced phase of growth and development would reach heights of civilization could not develop to a consummate degree of efflorescence in India. Art critics, archaeologists, and historiographers have drawn our attention to how most of the cultural aspects of our life, which had their rudimentary beginnings in North India began to grow and seek expression in the new habitat of Sri Lanka, away from the invaders' arms.

"The whole country was ours until the Sinhalese came"13 was the proud assertion of the Vaeddhas - believed to be the 'authochthonous' people of this land. With the arrival of the ancestors of the present-day Sinhalese in this country, around the sixth century B.C., the destiny of the Sinhala branch of the Vedic Aryans is linked, at least culturally with North India. And the Vedic Aryans are, in turn, Indologist maintain, on the basis of linguistic affinity and a common mythology and literature, along with Avesta Aryans north of the Hindu Kush, a branch of the still larger Indo-European people. Archaeological investigations corroborated by studies such as philology, mythology and literary traditions and coming down to still later times with epigraphic and numismatic evidence impart a broader vision to us as belonging to a wider circle of humanity. This line of thought towards a breath of vision and depth of understanding has been further invigorated by some of the exciting finds
in the centres of ancient civilizations. These discoveries, seem to dissipate the differences among people and accentuate the common links. One begins to feel, that beneath the thin veneer of nomenclature and classificatory jargon on religious, ethnic and linguistic grounds, however, imperative they may be for academic discernment and analysis, yet have no substantial basis in reality. We stumble on the Hittites (a people whose civilization flourished in the third millennium B.C.) of uncertain ethnic origin speaking an Indo-European language written in cuneiform.\textsuperscript{14} So too were the elusive Hurrians; who descended to the Mesopotamian Plains from the Armenian hills in the middle of the third millennia B.C. and who spoke a language of Caucasian origin also written in cuneiform. The non-Semitic people from Egypt to Morocco have adopted a Semitic language - Arabic.\textsuperscript{15} The examples of the Latin and the Arabic languages show that the use of a language may be extended far beyond the limits of the race to which it originally belonged;\textsuperscript{16} and the Semitic people of Lebanon sharing a common language and a way of life yet profess different religions. Sum total of human activities composed of values, attitudes, skills and talents which the sociologists call 'culture', the economists call 'human capital'. Whatever survives of material culture, come down to us as artifacts, but the 'human capital' in a mysterious way persisting in the 'collective unconscious' of people is reminiscent of their kinship with mankind at large. Much of the words, food habits, dress, art forms and other cultural traits of the Sri Lankan society which were once ethnic peculiarities, are now part of a common heritage.\textsuperscript{17} Archaeological studies, by revealing these fluctuating contours in man's cultural history tend to narrow down the differences and focus our attention of being a part of a larger whole. Results of field surveys in archaeological expeditions have brought to light artifacts of a wide variety, ranging from lithic records, sculptural and architectural remains, wall painting, items of domestic and household utility and coming to recent times, coins of various materials. Reflecting on these desultory finds the archaeologist and the historian, the aesthete and humanist have succeeded in imaginatively delineating the lives of the ancient people which make us feel that consanguinity and kinship which linked our ancestors to one another as it did, should bind us, - their progeny.

Sri Lanka, in South-East Asia, separated from the mainland by the Palk Strait, occupies an enviable position, where its geography has favoured the parallelogram of historic forces such as religion, philosophy, language, arts and letters, political life and economic organisation to develop in its new ambience reflecting the cultural sinuosities of Hindustan and still retain its distinct uniqueness. In a way, Sri Lanka
constitutes, as observed by Ananda K. Coomaraswamy, a window on India, through which we could still view some strands of ancient Indian heritage which have regrettably disappeared from the land of their birth.

Some perceptive minds delving into our past heritage, purely from the perspective of aesthetes and humanists have observed an analogy between Sri Lanka in South-East Asia and England in Europe, where their respective geographic positions in Asia and Europe have imparted to them a singularity in the cultural life of these regions. Both these island nations though cultural replicas of Europe and the subcontinent, have yet indelibly impressed their response to the cultural stimuli with a remarkable flavour to make themselves distinct from the Indian and European cultures respectively.

Archaeology in this country, unlike anywhere else, because of its close propinquity to the people’s ancient lore and traditions, their ancestral faith and language, and their arts and literature, is not something cold and objective, but inextricably bound up with the very texture of their thoughts and feelings— their sentiments.

Buddhism, as a dominant force, which it was in Asokan times has ceased to be in the land of the Buddha. The traditions of the Theravada, the orthodox form contained in the Canon, which had been handed down orally by the Theravada parampara (succession of elders), and finally affirmed and sanctioned by the Third Council presided over by Moggaliputta tissa, was brought to this island by Mahinda in the third century B.C. And it was in this country, that in the history of Buddhism, the Canon, came to be committed to writing, thus ensuring its safety and ready accessibility; thereby Sri Lanka assumed international significance in the Buddhist world. Besides the Canon there was an enormous corpus of Attakathas - or commentarial work, which were brought along by Mahinda. The importance of these Attakathas coming down from the time of the Buddha and as imperative for an understanding of the Canon made the sangha treasure them as an integral part of the Teachings of the Master. Consequently, Mahavihara in Anuradhapura, which became the radiating centre of Buddhist intellectual life came to be frequented by monks and scholars from India, China, Burma, Thailand and other Asian lands. One such distinguished scholar was Buddhaghosa who reached this country in the fifth century during the reign of Srinivasa. His encyclopaedic exegesis of the Canon as
Visuddhi-magga (Path to Purity) and his great commentary, the Samantapasadika constitute salient landmarks in Buddhist studies, which enhanced the prestige of this country further in the Buddhist world. Heretical thoughts (Vaitulya Adahas) too, found a place in ancient Ceylon, making Abhayagiri vihara its centre. Despite the vigour and zeal of some of its exponents, and occasional royal patronage, it failed to captivate the mood of the Sinhala mind. Dedication to Mahavihara as the repository of Theravada Buddhism was too great then, as now, for deviation from its path.

Austre simplicity of the Buddha’s teachings, of the four Noble Truths and the Noble Eight-fold Path which influenced the religious life of the early settlers also influenced their political and socio-economic life. This in turn came to be reflected in their arts and letters.

Though the origin of the Moon Stone is traced to India, it progressively evolves to a meaningful phase only in Sri Lanka in the Anuradhapura period. So too is the case of the evolution of the stupa or ceitiya and the Buddha image. Aggressive invasions of India never permitted the much-needed peace and calm for these original impulses of art and thought of early Buddhism to develop in India as it did in Sri Lanka. And when Anuradhapura too came to be besieged by South Indian invasions the confusion that ensued came to be reflected as a florid and over-ornamented art in the post-Anuradhapura period. The significance of the symbolism of the moonstone, during the Polonnaruwa period it is believed, was lost both in the sentiments of the votaries of the Buddha and in the skill of the craftsmen. Those colossal, yet aesthetically pleasing and spiritually sublime monuments, the stupa or ceitiyas soaring skywards, constructed by a grateful people in memory of the Buddha and the Dhamma were never to be equalled or excelled in magnitude and style anywhere in the Buddhist world. Archaeological surveys have revealed a prolific number of Buddha statues of immense size in India and Central Asia, most of them being of Mahayanic or Hellenic influence. Yet most art critics, aesthetes and humanists (such as Ananda K. Coomaraswamy, Benjamin Rowland and Jawaharlal Nehru) have expressed their admiration for some of the Buddha images of Sri Lanka which by their technical dexterity and supple artistry are evocative in their impact. The Buddha image at Outer Circular Road, and the Tovuliva Buddha are two of many such examples which have attracted attention. The latter was removed on the recommendation of the Archaeological Commissioner Mr. H. C. P. Bell and today lies at the Colombo Museum grounds. Of the many
art treasure this country has inherited, the Toluvi Buddha, should be considered one of the finest achievements of the ancient Sinhalese and undoubtedly from any canons of art, is worthy of being classed beside such creations of the sculptor's chisel which are considered tour de force. It should be the result of much labour, but in its monumental calm, it reveals no sign of labour. Whoever the sculptor who chisled it, we should remember, that he preceded Michelangelo by nearly 900 years as it is dated the fifth century. And he had to ply his chisel on gneises (metamorphic rock) which as a medium is not so amenable to the sculptor's chisel as marble would. Greek sculpture beside the beauty of the human form has nothing to convey or communicate to mankind. Seated in the samadhi mudra, in the absolute calm of nirvanic bliss, the Toluvi Buddha is expressive not only of vimukti - liberation, but of inexplicable beauty - a beauty austre and benign, which only a sculptor could convey without the gorgeous trappings of painting and music.

Pali, the canonical language of Theravada Buddhism, especially after the fifth century was invigorated in the literary tradition of this country for the expression and flexible use of the most subtle metaphysical thoughts. 'Buddhagosa left behind him in his many works a language which in vocabulary, flexible in its use, elegant in structure....... and capable of expressing all ideas that the human mind had then conceived!' As other elements of culture, the language of the early Aryan settlers too developed in comparative peace in their island home. We do not know for certain, what the exact origin of this language was. Mahavamsa refers to it as 'Dipabhasha'. Though it is enriched by Pali and at later times by Sanskrit, we do not know if it was derived from these classical languages or even began as a dialect of the group of languages referred to as 'Magadhi'. In any case, for nearly three hundred years, the 'language of the land' among the Aryan settlers evolved through modification and development to be rich enough by the time of Devanampiyatissa for Venerable Mahinda to discourse in it of such abstract matter as contained in the Commentaries that he had brought along from the Council at Pataliputra. Many matters of particular importance such as, the origin of Sinhala language; the language of Mahinda and the apparent ease with which his preaching was understood and the swiftness with which it spread over the whole island should become transparently clear when one ponders on the Asokan (Kalinga) rock edict 'Sarva Manusa Ma Praja'. While rapacious invasions overwhelmed and even smothered the earlier religions and languages of North India, the language of the Sinhalese in their sequestered insularity had an untrammeled evolution to react
literary heights. With the introduction of Buddhism, there was undoubtedly an increase in the frequency of cultural contacts with India. With the consequent infusion of Pali and Sanskrit the ‘Dipabhasa’ developed to a point to usher in a Sinhala literary tradition. The Buddha had instructed the sangha to preach to the people in their own language. ‘Mahinda gave the lead to this tendency, not only by preaching in the ‘language of the land’, but more so by translating into it the Commentaries on the Pitakas.’

As in the case of religion, language and the literary tradition, the progeny of the early settlers displayed a resilience in their nostalgia for the Vedic deities even after their conversion to Buddhism, as some of these themes came to be depicted in their artistic tradition, with one difference - that these deities were now subservient to the Buddha and the Dhamma. Cultural historians and art critics in their attempts to interpret the works of art of the early period found recourse to Vedic lore and the epics. The interpretations varied, but the source of inspiration for their interpretation was the same. For instance, Dr. Paranavitana’s interpretation of Man and Horse’s Head, near Tissavasa, Issurumuniya in Anuradhapura is a classic example. His attempts at an interpretation of our ancient survivals in art and architecture was altogether different from his predecessors. His enormous knowledge and understanding of Indology, the epics, philology, epigraphy and his familiarity with Indian iconography and our literary traditions determined this different perspective, which was synthetic and holistic. Although art and architecture could be studied for their intrinsic beauty as the aesthetes do, he went beyond and viewed in the whole ensemble in which they were located, his perspective besides entailed even the natural-physical environments in which they were originally found. This approach finds its best expression in his studies of, The Significance of the Sinhala Moonstone; Man and Horse’s Head - Tisavasa; Lankatilaka Polonnaruwa; and the Buddha Image, just to mention a few of his prolific output. One is overwhelmed by his knowledge, perceptive insight, attention to detail, persuasive logic and his interpretative skill. The readers are fascinated and swept off their feet. But on re-reading, one’s reason begins to re-assert itself and ask the question: How much of these brilliant monographs on the cultural history of our country have an archaeological basis? Archaeological perspective as it gathers momentum would become imperious; on the basis of its evidence a rectification of other sources on which hitherto history had been written would be called for.
The imaginative forcefulness and the tolstoyan sweep of Paranavitana’s writings tend to subdue the critical and analytical faculty of the readers. His identification of the ‘Man and Horse’s Head’ with the Vedic deities as Parjanya and Agni and the Tisavava on which the Man’s gaze is fixed as the visible manifestation of the bounties of these deities symbolising rain and warmth is remarkably appealing as these two factors of water and sunshine are indispensable to the agricultural settlers. This ingenuity of Paranavitana in his synthetic approach at interpretation reaches a high point in his ‘The Significance of the Sinhalese Moonstones’. (Artibus Asia). He selects the three famous Moon Stones of the Anuradhapura period, namely the ones identified as those of Mahasena’s palace, of Thuparama and that of Queen’s pavilion. He maintains that they had always been placed at the entrance to shrines which housed the Buddha image. And he further maintains, that the significance of the moonstone was lost in subsequent times. In addition to his general approach he views every motif in the concentric circles of the moonstone to imply symbolically, the main categories of the Buddha’s teaching and guides the reader’s eye to the image of the Buddha himself beyond the three steps, from where he looks down on the moonstone calling upon, as it were, the attention of the devotees who have to step across it to reach him. There is much in Paranavitana’s intellectual productions to fascinate the reader not only on aesthetic consideration but also as they tend to heighten the devotee’s religious feelings and excite one’s sense of patriotism. An archaeologists role has to be synthetic; from the laborious work of exploration, survey and excavation he should imaginatively interpret the finds to reconstruct our history. At this stage, quite naturally one begins to observe the fluctuating contours of archaeology and history. "Between archaeology and history there is no fenced frontier, and the digger who will best observe and record his discoveries is precisely he who sees them as historical material and rightly appraise them: if he has not the power of synthesis and interpretation he has mistaken his calling".32

Though archaeology was the main area of interest of Paranavitana, epigraphy was his forte and his knowledge of such kindred subjects as are necessary for the writing of history was prodigious and with his ability to retrieve from his immense store of knowledge he came to dominate history, especially the cultural history of this land from ancient times to almost the beginnings of European activities in the sixteenth century. Even a cursory glance of the Annual Reports of the Department by him shows his capacity for field work; this work in addition to, perhaps the
unavoidable paper work of the Department was punctuated by his academic productions in which he brought to bear his wide-ranging scholarship in a highly individualised stylistic verve. In the same way as he shattered our complacency to have believed the older historians' stance on our ancient history by making us think on fresh lines, today, new findings by the Department of Archaeology is beginning to look askance at some of his interpretations. His captivating writing tended to entrance those who came in contact with them. "With the information gathered from a variety of books, Prof. Paranavitana is in a position to marshall numerous arguments in support of a theory, often creating a majestic vision in front of his readers." Thus he brought lustre to the Department of Archaeology and the University of Ceylon, where he held the Chair of Archaeology. Yet despite the acknowledgement of his contribution to archaeology and history, and reverence for this great savant, some of the younger generation of historians, following him in the spirit of scientific and critical inquiry, have begun to dispute the validity of some of his methodologies. This spirit of objective inquiry should be considered a great tribute to his intellectual tradition.

In our perspective of the contributions of Sri Lankan archaeology to culture and international understanding, we are fortunate to be heirs to a rich and enduring tradition which continues to retain a sense of discovery and excitement. Archaeological studies in this country lured men of wide interest to the immediacy of our past. Noteworthy contributions, being the result of sustained scholarship, have been made by individuals who were not officially connected with the Department of Archaeology. Out of this combined effort of outside scholars and of the Department has emerged a worthy image of this country's past.

EPIGRAPHY

Another rich and decisive source for the study of History is Epigraphy: the study of inscriptions that were inscribed on stone and metal (copper) plates. Inscriptions are free from the limitations of literary sources and hesitant speculations on stylistic grounds of the material artifacts. Sri Lanka, which has a prolific store of epigraphical material ranging from the Brahmi inscriptions of the third century B.C. to modern times constitute another supplementary and more reliable source for the reconstruction of this country's past. In fact epigraphy, in many ways by correcting and emending the versions contained in our literary records, and in establishing the
identity and chronology of archaeological finds has brought about a refinement in our understanding of early history. The value of our epigraphical treasure cannot be underestimated in philological investigations to trace the evolution of Sinhala characters and language, its grammar and usage as they evolved over twenty three centuries. "These inscriptions, as well as the others which are not of particular historical significance, are also interesting in another respect. They add a large number of words to the known vocabulary of the old Sinhalese language, supply us with grammatical forms not forthcoming in other documents, give information regarding important points in the phonetic changes which the Sinhalese language has undergone during the course of the centuries, and also elucidate many an obscure point in the evolution of the Sinhalese script."

As these inscriptions come down to us from pre-Christian times, we are exceptionally fortunate to seek recourse to epigraphy as a dependable source to an ancient heritage. The earliest inscriptions are contemporaneous with Devanampiyatissa (247-207 B.C.) who was a contemporary of Asoka (c 274-232 B.C.) during whose reign Mahinda Thera, as special emissary of the Mauryan monarch introduced Buddhism to this island. These inscriptions number over 2,500 of which well over 1,000 are from the third to the first century B.C. All these inscriptions have been edited and published in the Epigraphia Zeylanica commencing in 1904. Though most of the pre-Christian inscriptions of this country are brief, dedicatory or donative they have proved to be a fruitful source of information. In the hands of the discerning archaeologist, who by inferential thought and aided to some extent by other sources is able to extract much information from inscription in the reconstruction of our past. "The inscriptions of Ceylon constitute a very valuable source of information on dynastic succession, taxation, land tenure and administration. They enable us to form a broad picture of the social order and the everyday life of the people. They are an invaluable source of ancient place names. Above all, they are the best evidence of the reliability of the Chronicles, because, over and over again, they corroborate statements made in the literary sources."

Besides the lithic records, H. C. P. Bell, at the commencement of this century alluded to the information contained in sannas (Royal land grants to individuals and institutions, mainly to the Sangha) which were engraved on copper plates. Inter alia their importance to trace the evolution of Sinhala characters and language from
a philological point of view is emphasised. 40

It is in recognition of epigraphy as a valuable source of history, that even before the Archaeological Department came to be constituted that, from 1875 to 1879, the German scholars P. Golschmidt and subsequently Edward Muller were engaged in the study of the inscriptions of this land. The preliminary report that was submitted on these studies was published as, Ancient Inscriptions of Ceylon (1881). This epigraphical study was continued with distinction by Dr. D. M. de Z. Wickremasinghe who brought out the first issue of Epigraphia Zeylanica in 1904. Senarat Paranavitana who succeeded him as epigraphist, in addition to his editorial undertaking of Epigraphia Zeylanica, produced his two volumes on Sigiri Graffiti which besides being a landmark in the history of epigraphy, is a monumental contribution to archaeology itself. It has become a source of reference, to the historian, philologist and grammarian. By this work he recreated the Sinhala language between the period from the eighth to the tenth centuries. With his amazing knowledge of Indology and philology and the incisive understanding of oriental languages, epigraphy became his forte. Hence, he was able to come out with bewildering interpretation of ancient history contrary to all traditional views. To cite just one instance, his thesis, that the Kalinga dynasty came from Malaysia was finally substantiated by epigraphic evidence. 41

NUMISMATICS

Alongside other evidence such as literary, epigraphic and archaeological, numismatics turned out to yield a wide range of information, especially valuable for chronology and economics; reflecting the physical extent of territorial dominions, international relations and commercial connections in a known spatiotemporal setting. Coins of various types and class have been found in the course of excavations in Anuradhapura, Sigiri, Polonnaruwa and elsewhere. Unlike the coins of the modern period after the fifteenth century, these coins have reached this country from India, China, Rome and Muslim lands in the early period of our history. Of these, the largest hoards were Roman coins, which is evidence of commercial, cultural and perhaps diplomatic relations. Large collections of Roman coins from wide and varied parts of India confirms the Roman connections in the South Asian region. Wheeler in his most significant dig at Arikamedu, close to Pondicherry in South India stumbled on a prolific amount of coins and Roman ceramics of immense
variety and volume. This corroborates Pliny’s reference to Roman connections with the island. This is further corroborated by the reference in the commentary to the Mahavamsa of Bhatika Abhaya sending envoys to Rome. 42 One of the pioneering work on numismatics in this country was that of H.W. Codrington, - Ceylon Coins and Currency (Col.1924).

The patterns of culture, their interactions and the heights they reach as civilizing forces despite occasional regressions caused by internal decay or external aggressions appear as a continuous and collective process in the story of man. It is in portraying this resiliency of the human adventure that archaeology, in our view, makes a worthy contribution to our cultural tradition, thereby enabling us to obviate myopic, narrow and chauvinistic streaks on life. Majority of the people of Sri Lanka are, what they are - Aryan, Sinhala, Buddhist or Dravidian, Hindu, Tamil because they owe their cultural origins to the subcontinent. And those who profess the Christian or Islamic faiths owe much in their cultural elements to the still wider communities of Christian and Muslim fraternities. Similarly, in our pursuit of antiquarian interest at its present stage of development as the scientific discipline of archaeology, we are, beholden to the West, mainly, though not exclusively to Britain for having inaugurated it officially and institutionalising its activities through the Archaeological Commissioner’s Department since 1890.

As every cultural and political activity on the subcontinent had its reverberations on this island, so was the genesis and development of archaeology. The first archaeological survey of India commenced in 1871, with General Cunningham as the Director-General of Archaeology. 43 With the active encouragement of Lord Curzon, the Viceroy, who valued the marvellous archaeological heritage of India she was destined to make headway and he was mainly responsible in getting John Marshall, a young classical scholar from Cambridge in 1902 to head the Archaeological Department in that country. Nearly two decades later in 1890 archaeology in an official sense begins in this country with H. C. P. Bell as the head of this Department. Archaeological development in this country was thus, subsequent to and perhaps not uninfluenced by the Indian experiment as both countries were under the same imperial rule.

History is, especially favourable to those who arrive late; so Sri Lanka was able to avoid the mistakes of the formative years of Indian archaeology. John Marshall
had, 'taken office at an early age and at a period when modern archaeological techniques were in a rudimentary stage.'44 The memorable achievements of Mortimer Wheeler who assumed control of archaeology in India in 1944 and the monumental contributions he made to archaeology to make it a respectable intellectual pursuit benefited this discipline everywhere including our own country. His archaeological survey, excavation and presentation of his research findings imparted to cultural history what may be termed an 'archaeological perspective of man’s past. Further, his training of young men in its modern ideas and methods and by rousing the governments, universities and the educated public to a proper appreciation of archaeology, coupled with his amazing extent of field work in India, Pakistan, Persia, England and elsewhere invigorated archaeology and enlivened our archaeological insight. Acumen and acuteness with which archaeological work is pursued in this country since Bell owes a great deal to such great pioneers from the West whose spade and brush brought to light the great civilizations which had been silenced by the ravages of time.

Some of these pioneers such as Wheeler and Gordon Childe in Britain and David Schlumberger in France had to lobby, make speeches and even resort to journalistic pleadings, go on the air, and appear on T.V. screen to gain recognition and to kindle interest in archaeology. This is understandable, as among most people there is no resonance with what has been brought to light by archaeological discoveries. Except the negligible lot of aesthetes who are motivated by artistic considerations the bulk of mankind remains impervious to the 'mound of the dead' (Mohenjodaro). This nonchalance to archaeology is not without a basis in fact. Human geography of every country, hence of the entire world continues to change; correspondingly the prevailing mood, thoughts and aspirations, values and frame of reference undergo changes. Without exception, the present-day inhabitants who occupy the sites of ancient civilisations such as in Egypt, Mesopotamia, the Yangtze and the Indus valley and in the Graeco-Roman empire have renounced the religions of their forefathers, evolved or adopted new languages and are moved by a different ethos. So it is with the people of Iranian tableland of Persia, Afghanistan, the Central Asian republics and Anatolia or Asia-Minor which were the seats of ancient civilizations. We may multiply these illustrations without end. But the main consideration to be borne in mind is, that archaeology, as an academic pursuit despite its scientific techniques and methodologies which impart credence to its finds, is unable to move the thoughts and feelings of the people except in an academic
sense. Its valid and imaginative claims and ‘models’ of the past are undoubtedly appealing to the intellectual apprehension of the elite. But the life of the people of these respective lands remain uninfluenced by what may be called the ‘archaeological perspective’, rendered possible by the ingenuity of those who have interpreted the findings of archaeology from many parts of the world. And it is precisely because the Sri Lankan situation is altogether different that archaeology in this country is something alive, meaningful and constitutes and integral part of the thoughts and feelings of the people - at least of the major segment of the population of Sri Lanka who are Sinhalese and adherents of the Teachings (Dhamma) of the Tathagatha. Here is a country where, unlike anywhere else, efforts on the part of government or even at non-governmental levels to stimulate people’s interest in archaeology is superfluous. Following the western tradition, its humanists and its pioneers, in this country too, men of scholarship and learning in all sincerity set such bodies in motion. One such institution was the Archaeological Society of Ceylon, in the activities of which, Dr. Gunapala Malalasekera and Dr. Nandadeva Wijesekera, two of the eminent cultural historians participated, along with Mr. D. T. Devendra, to whom archaeology was a passion and joy of life. Though useful, such societies are not essential as in other lands, as majority of the successive generations of the early settlers of this land tenaciously clung to their ancestral faith - Theravada Buddhism, their language and love of the main elements of their cultural tradition despite this land having been the victim of rapacious aggression, war and colonization in the long history of this country of nearly two and a half millenia. No wonder, the ancient monuments that survive for well over two thousand years and those artifacts brought to light by the archaeologist’s spade by well over a hundred years of survey, excavation and conservation and every inch of this land is sacred primarily to the Sinhala Buddhists of this land and equally to all Buddhists. While the intellectual elite and most people of the world are talking and writing of archaeology, people of this land are living it. Consideration of this piquancy of contrast between Sri Lankans and the rest is vital for a meaningful appreciation in reviewing archaeological progress in this country. Pendent for archaeology among the Sri Lankans, particularly among the Sinhala Buddhists make them nostalgically relive their past. Hence, the archaeological operations since its commencement under a separate department has been viewed by the Sinhala Buddhists with religious reverence. Archaeology, either as an intellectual trait to have a glimpse into the past or as a systematised and disciplined investigation aided by epigraphy, numismatics and a study of art and architecture of ancient times makes the cultural
awareness of our past something vital, fresh and living. As such in a religious sense, to the majority of the people of this country, archaeological work is something edifying. The understanding between the people and archaeology and this resonance with the past has hardly a parallel anywhere. Instances are recorded of Buddhist priests\textsuperscript{46} and ordinary citizens who with religious ardour work in the preservation and maintenance of archaeological sites. Archaeological sense is something enshrined in their hearts as an integral part of their psyche. For them, archaeology has not been digging up things, but people. This state of affairs in the context of our inquiry seems to fulfill a cherished hope of Mortimer Wheeler\textsuperscript{47} "In a simple direct sense, archaeology is a science that must be lived, must be seasoned with humanity." Thus archaeology in this country, is not divorced from, but grounded upon the sentiments of the people, hence, following the Pali chronicles they reiterate the reference to this country as Dhammadipa.

Henry Charles Purvis Bell, who commenced operations on behalf of the Department around Anuradhapura in July 1890, set his mind on a vast array of subjects which inspired those who followed. It was in his First Report (1890) that he drew our attention, besides other matters to Sigiriya and Tolvila Buddha, both of which became subjects of inexhaustible interest to a wide range of studies. His successors have been expanding what he explored, striking new pathways which would demand revision of our older views relating to the history of this country. Recent excavations\textsuperscript{48} conducted in the inner citadel of the ancient city of Anuradhapura by the Archaeological Department, have produced conclusive evidence of an "Iron-and-Horse" using civilization nearly 300 years before the arrival of legendary Vijaya and his Aryan settlers. This pushes back the frontiers of an advanced civilization in this country to about the beginning of the first millennium B.C. This conclusion, it has been reported by Dr. Saddhamangala Karunaratne, is based on what the excavations brought to light of pottery, iron implements and fossilised bones of horses. Radio carbon technique employed has determined the dating of these artifacts.

The discovery of Radio-Carbon dating based on C-14, is the most important milestone in the development of archaeology since the discovery of the antiquity of man and the acceptance of a system of ages. To the archaeologist trained in the pre-Libby days the most exciting result of Carbon-14 dating is the fact that artifacts from pre-historic times can now be accurately dated. If the Three-Age technological
system produced, set in motion to make archaeological investigation a scientific discipline with a relative chronology, the Libby revolution made archaeology a 'historical science' with a chronology which enabled history writing to move from speculative probabilities to hopeful certainties. It has, undoubtedly brought us within range of our ultimate goal - the writing of history in terms of exact dates. In the context of this possibility to arrive at accurate dating, the recent finding of the Department of Archaeology of this country, relating to pre-Vijayan period, augurs well for the Department as it concludes the 100th Year of Archaeology in this country and embarks on a promising Second Century. It is becoming increasingly clear, that from now on, Archaeology will take pride of place, which hitherto was held by literary evidence as the main source for the reconstruction of our ancient history. Dr. Siran Deraniyagala, who directs these operations, is sanguine, that further findings would follow in the course of the excavations. During the formative years of Sri Lankan historiography, the Pali chronicles, and a literary tradition based on them were the primary, if not the exclusive source for history writing; then came a much more accurate, if not a reliable source of evidence, namely epigraphy to which was added numismatics as another ancillary source for the reconstruction of the island story. Scientific orientation of archaeology has today, brought international recognition to it as a scientific-discipline. And Sri Lankan archaeology has, gone a long way to push the frontiers of the history of this land beyond the legendary beginnings of the sixth century. Its official excavations have added substantially to confirm, revise or recant the claims of other sources. With archaeology as an empirically verifiable source, historiography is on terra firma, along with our ancient literary and epigraphic traditions to deepen our understanding of the past and link us by a still wider perspective with the ancient civilizations of the world.

Archaeology in this country has been fortunate in the type of personnel who joined this Department right from the beginning. Bell was succeeded after nearly twenty two years by Edward Ayerton, who before coming over to this country had worked in the 'land of the Pharaohs' with W. M. Flinders Petrie and at the Egyptian Exploration Fund. Hence he was familiar with the instructions of Petrie as contained in his, Methods and Aims of Archaeology (1904). Petrie's instructions stood him in good stead in continuing to add to the traditions of Bell, of making archaeology a liberal education and a scientific tradition: "... A complete archaeological training would require a full knowledge of history and art, a fair use of languages and a
working familiarity with many sciences. Archaeology - the knowledge of how man has acquired his present position and powers - is one of the widest studies, best fitted to open the mind to produce that type of wide interests and toleration which is the highest result of education....."

Before the premature and unfortunate demise of Ayerton, his Report was published as a Sessional Paper (No. XIII of 1914) under his own name. This report besides incorporating his findings, evinces a concern in consonance with Petrie's trend of thought to broad-base and systematise archaeology in keeping with scientific methodologies in surveys, excavations and perspectives. Arthur Maurice Hocart who succeeded Ayerton published the First Memoir (1924). Hocart having read classics and pursued the study of mental sciences was engaged in archaeological field-work with Pitt Rivers (1827-1900) in some Pacific islands before he made his contribution to archaeology in this country. His studied contribution to the Ceylon Journal of Science (Sec. G), which he edited, are suggestive reading even today. He realised the importance of architecture and in some of his writings he tried to construct imaginatively, basing his studies of the local situation - of the sequence on the evolution of building styles in ancient Lanka. Architecture has long been the most popular branch of archaeology. "The buildings of every nation are an important part of its history, but a part that has been neglected by all historians...." Thus Hocart's arrival at the Department proved to be extremely useful as his perceptive insight into the importance of architecture as an essential element in the archaeologist's endeavour to reconstruct our past fell on receptive minds. Senarat Paranavitana who came to be recruited as an epigraphist grasped Hocart's message which fructified in his mature years in some of his finest treatises relating to architectural considerations in viewing the past.

From the size and complexity of the very few surviving buildings, inferring from their ground plans and literary references to their superstructures, it can be safely maintained that these buildings presuppose not only a long tradition of skill and craftsmanship but also planning and organising the varied skills and expertise based on long experience and knowledge. On closer scrutiny of the architecture of our ancients, one realises the harmonious blending of art and architecture and both with their traditions and religious aroma. Hence a synthetic approach to seek a holistic understanding of our ancient monuments by Paranavitana is intelligible. Though our historic monuments may be studied for their intrinsic value per se, as aesthetes
do, they undoubtedly reflect the ethos of the time. Hence every architectural and artistic element of a given edifice is not only meaningfully inter-related, but organically made to harmonise even with the physical, natural environment from which it emerges. Perhaps, the architect, the artist and the landscapist deliberately directed the builder, the sculptor and the painter to drive home an idea, and induce an emotion in order to elevate the spirit of those who approached these monuments. The interpretative skill of Paranavitana of the ancient monuments in their organic unity reaches a point of exquisite beauty on the firm basis of his knowledge of his literary, epigraphic and archaeological sources. This method finds eloquent expression in his evaluation of 'Man and Horse's Head'; "Significance of Sinhala Moon Stones" both at Anuradhapura and Lankatilaka (Jewel of Lanka) at Polonnaruwa. Such a frame of reference permeates his evaluation of art and architecture especially in his mature phase. Viewed thus, Sri Lankan culture, despite the original elements that the early settlers brought along and the subsequent infusion from the subcontinent remains particularly native in form and ceases to be a mere mechanical extension of India. Taking into consideration, the functional aspects of art and architecture and the manifold ways by which the early settlers embodied into them their accumulated traditions and beliefs through skilful artistry, one could discern the uninterrupted native lineaments that are peculiar to the people of this country, even though the original impulses can be traced to India as in the large-scale features of our cultural life. Excessive categorisation of these traces as distinctively Amaravati, Pallava, Gupta and the Pala schools may be useful, perhaps academically desirable, but certainly would becloud our unconditioned appreciation of the Sri Lankan cultural history.

Retracing the contributions of those who served the Department and thereby Archaeology in this country, mention should be made of A. H. Longhurst, who with his excavation and survey experience in South India found in the remains at Polonnaruwa, as they have a resemblance to South Indian features, a good area to cover. By his time, the Department of Archaeology in this country had come to emulate and adopt the scientific techniques and systematic methodologies of archaeology elsewhere. So the appointment of a scientifically - qualified (chemist) personnel in 1949 was a long overdue measure. Eventually, when the University of Ceylon, following most European universities, created a chair for archaeology and appointed Dr. Senarat Paranavitana as its professor, it was indeed an academic acknowledgement and justification of the achievements of the Department of
Archaeology in Sri Lanka. As he impressed his personality on archaeology and the Department of which he was the commissioner (1940-1956) he added lustre to our centre of learning. Collective efforts of this Department and of the many aesthetes and art critics, humanists and cultural historians, have animated the country's annals by making it pleasing and meaningful to understand our past.

What were once great civilizations were reduced to silent mounds of rubble that were once lively towns with their palaces and temples, bazaars and human settlements. Our understanding of the past was, before the beginnings of archaeology, based on lingering oral traditions and fascinating literary records. With systematic surveys and excavations and methodological arrangements of desultory artifacts such as, pottery, tools, relics of funerary rites and fossilised remains of man and beast, the archaeologist attempted to fit them into their proper order in time and link them to known history, which enlarged and clarified our knowledge of mankind from the beginning. The significant role of archaeology in this direction of inquiry was, the tendency to regard artifacts rather than literary testimony as the primary foundation for the reconstruction of the historical past. The superiority of archaeological evidence to literary evidence had been proclaimed by many pioneers of this discipline.53

Prior to the commencement of archaeology and its official beginnings, historiography in this country, as elsewhere, had been conceived as essentially literary activity, and in the absence of archaeological evidence historians had to fall back heavily on the legendary beginning of civilization as contained in our chronicles. But since 1890, this trend began to change, as archaeological activity from that year came to be organized and centrally directed by the Department of Archaeology. And with more protective legislation the scope of archaeology was enlarged and invigorated. Consequently, the tremendous output of the Departmental field work as contained in the Annual Reports progressively strengthened the archaeological basis of our history. The unearthed artifacts, and the vistas it held out to the intellectually alert, generated a prodigious volume of writing on various aspects of the life of our ancient society. Now it is possible for the historian to venture beyond the antiquarian and speculative stages and to handle these primary sources with a degree of sophistication which is, as in all sciences still being improved. Sri Lankan archaeology, with over a 100 years of activity, has made a remarkable contribution by weaving her own cultural strands into the tapestry of world civilization and
humanism. If humanism has infused into the archaeological perspective a breath of vision, then this country's archaeological activity has, certainly imparted to humanism a sense of intellectual curiosity, good taste and love of humankind, and looks forward to the 'future of the past' with hope and optimism.
NOTES


2. Methods and Aims in Archaeology (1904) - Flinders Petrie.


15. Ibid Ch.2., pp. 35-36.


22. (i) The significance of the Sinhala Moonstones. Artibus Asiae - S. Paranavitana;
(ii) The Stupas of Ceylon. - S. Paranavitana.


27. For more on this vide; Introduction to Sidat-Sangara. By James de Alwis.


30. Pre-Buddhistic Religious Beliefs in Ceylon. - S. Paranavitana.


47. Archaeology from the Earth. 1954. Constitutes his instruction book in field archaeology, based on his Rhind lectures of 1951.


THE BRAHMI INSCRIPTIONS AS A SOURCE FOR THE STUDY OF PURANIC HINDUISM IN ANCIENT SRI LANKA

By

S. K. Sitramalam

Hinduism as it is understood today embodies various cults and practices which found their way through centuries of its development. The most important cults are the primitive Yaksa-Naga cults, the Vedic and the Puranic cults. The Yaksa cult which is often described as the cult of nature or animism, in fact depicts the early form of worship, where the Yaksas were deified as devas (Gods). The Yaksa cult was later accommodated and assimilated in Hinduism. Every Hindu deity, even Buddha, is spoken of upon occasion as Yaksa (Coomaraswamy Ananda 1971: 36-37). Because of this very nature one could even see a confusion in the Pali chronicles of Sri Lanka regarding the exact nature and relationship between the Yaksa cult and the Hindu cults. However, it should be remembered that in later times only the Yaksas came to be identified as malevolent beings in a despised manner. The Naga cult however, revolved around the divinity of Cobra. With sacrifice playing a pivotal role, the Gods like Indra, Agni found a prominent place in the Vedic pantheon. The rise of Puranic Hinduism witnessed the emergence of Trīmurtis, namely Siva, Visnu and Brahma and other cults associated with them as supreme beings, thereby the Vedic deities faded into the background. Thereafter worship around the Temple, in place of a sacrificial altar assumed significance. This, post-vedic phenomena of the emergence of the Puranic Gods and the syncretism and assimilation of the cults mentioned above into their dominion was accelerated in about the first four centuries before Christ and continued for about the same period even after Christ as well in India.

The above cults and practices have also found their way into Sri Lanka during the Pre-Buddhist times as well. This is quite evident from the study of the earliest Pali literature and the Brahmi inscriptions of Sri Lanka. With the introduction of Buddhism into the Island in the middle of the 3rd century B.C., the literary activity was centered around Buddhism. The earliest Pali chronicles of Sri Lanka namely the Dipavamsa and the Mahavamsa which were centered on Theravada Buddhism became the source books for the history of Buddhism in Sri Lanka. As a result of this, the Pali chronicles which remain the main sources for the study of Hinduism too throw less light on this aspect. Nevertheless, the Brahmi inscriptions which began to appear around the same time as Buddhism in Sri Lanka record the
donations of caves to the Sangha mostly by the new converts to Buddhism. Fortunately the names of these donors have been preserved in these inscriptions. These names when they are of religious nature are of non-Buddhist origin. (Paranavitana, S. 1970). Unfortunately no further details of the religious practices are evident because the very nature and scope of these sources have been very much restricted and confined to Buddhism only. Referring to the Brahmi inscriptions, Paranavitana (1929 : 320) who himself was a pioneer in the study of the Pre-Buddhist religious beliefs of Sri Lanka observed that as it takes sometime after the introduction of a new religion for the people to adopt personal names suggestive of the changed atmosphere, those found in the earliest Buddhist inscriptions may be taken as evidence for the Pre-Buddhist religious conditions. Perhaps, these names when correlated with other evidences from both literary and Archaeological sources throw welcome light on the Pre-Buddhist religious beliefs particularly Hinduism. The aim of the present paper is to study the Puranic phase of Hinduism in Sri Lanka on the basis of the Brahmi inscriptions which are mostly of Pre-Christian in date, published by Paranavitana (1970). However, it should also be noted that the inscriptions number unless indicated otherwise are from Paranavitana (1970).

Paranavitana (1929 : 327) while summarising the Pre-Buddhist religious beliefs opined that while the vast majority of the people were the followers of Yaksa cults, the most intellectual among the people professed Brahmanism. Unfortunately the Pali chronicles enumerate the Yaksa cults only and not the Naga cults. Conversely, while the Naga cult is enumerated in the Brahmi inscriptions, the Yaksa cult figures only in a solitary reference, that is to Kubera, the King of Yaksas. As the cave donations could be made only by the persons who could afford it, it is very likely that these donations reflect the patronage by the affluent class of both the sexes. The titles occurring in the epigraphs confirm the affluent nature of the donors as well. Some of them had the title Raja, Gamani, while others Aya/Abi indicating their royal status. The form aya could be read as Ay, indicative of the line of chieftains ruling in the southern part of Tamil Nadu and Abi as having originally derived from Dravidian Ayvai, Abhe and finally Abi, used as an honorific mode of address to ladies with respect (Sitrampalam, S. K. 1980). However the personages bearing the titles such as Panumakas, Gahapatis/Gapitis and Gamikas dominated the list. While the first two were the backbone of the rural administration, the last one was a wealthy land owning merchant class (Karunatilaka, P. V. B. 1986). ‘Bata’, too figures as donors. Though Paranavitana (1970) has rendered this form as ‘Lord’ it is very likely
that it is a reference to Barata/Baratavar, a maritime mercantile community who lived in the southern Pandyan country of Tamil Nadu (Sitampalam, S. K. 1980: Seneviratne, S. 1985). The other important element of these donors is the use of names of the Puranic Gods/Goddess by monks (teras) and the lay worshippers of both male and female sexes referred to Upasakas and Upasikas respectively (Fig.1).

The important feature found in these donations is also the use of suffixes such as ‘Deva’ ‘pala’ ‘Gutta’ ‘rakhita’ ‘idata’ ‘dina’ ‘dasa’ ‘mita’ and ‘buti’ after the name of a particular deity. The word ‘deva’ while occurring after the name of a particular deity occurs alone in about 23 epigraphs with its feminine form ‘Devi’ in another four epigraphs. Banerjee (1966: 70) quoting from the early Buddhist literature opines that this is a reference to ‘Siva’. However Paranavitana (1970) took this as a reference to Gods in general. Suffixes ‘Guta’ ‘rakhita’ and ‘Pala’ seem to have been used to denote ‘protection by a particular god’. Data and dina were used to give the meaning of ‘given by the God’. Both Dasa and Mita indicated ‘servant’ and ‘friend’ respectively. Buti again referred to a person who owed his existence to a particular God and Anubuti indicated a person who experienced the grace of God. These inscriptions also show that in a few cases at least the two generations continued to profess the same cult (111, 494, 582). Instances are also not wanting for the father and the son professing different cults (914). There are also evidences for the presence of the names of the Naga and the Vedic and the Puranic cults in one and the same inscriptions (166, 328, 972, 984).

The word ‘Yaksa’ though does not appear in the epigraphs Kubira (Kubera), the King of Yaksas, figures in two epigraphs (94, 489) and Vaisravana, another epithet of Kubera appears in a solitary instance (9). This God Vaisravana is referred to as Vessanyanna, as having his abode under the banyan tree as far back as during the reign of Pandukabhaya in the 4th century B.C. (M.V. x : 89). Moreover, the references in the Pali chronicles to the Yaksas such as Kalasodara and Dhanesvara have been taken as a synonyms of Kubera (Paranavitana, S. 1929 : 315). The word Naga occurs in nearly eighty inscriptions (Paranavitana, S. 1970). Naga, Nagadatta and Nagamita are the forms mentioned in these epigraphs. Devanampliyaa Tissa (250 - 210 B.C.) in whose reign Buddhism was introduced in Sri Lanka had a brother, named Mahanaga. He was also the heir apparent to the throne. Thulatha Naga (119 B.C.), Khallatha Naga (109-103 B.C.) Cora Naga (62 - 50 B.C.) and Mahadathika Naga (7 - 19 B.C.) are some other names of the Kings of the Pre-christian period
whose names included the ‘Naga’ suffix.

The names of the Gods of the Vedic pantheon figure in about fifty inscriptions. Indra occurs as Ida (902) with suffixes in forms such as ‘Idabuti’ (925) ‘Idaguta’ (542) and Idarakhita (641). The form Surinda (119) has been taken by Paranavitana (1970) as a reference to Indra, the King of the Devas. Agi (435, 789, 885) Agideva (660 c), Agidata (724, 727, 773) Agibuti (1099) are the forms in which the God Agni figures in these records. The name Varuna occurs, in two epigraphs only as ‘Varunadatta’ (2) and ‘Varunaguta’ (411). The form ‘Kada’ has been taken as a reference to Kala (Yama) (376, 782, 1119, 1220) by Paranavitana (1970). Surya (Sun God) appears as Suri (having the following forms), Suri (454, 812) and Suriguta (701, 751). Soma (188) Somadatta (975) Somadeva (24, 523, 1003) and Somaliya (140) are the forms in which Soma (Moon God) appears here. However, the most popular of the Vedic Gods seems to have been Mita (Mitra) whose name occurs in nearly half the epigraphs mentioning the Vedic Gods with the following forms, ‘Mita’, ‘Mitadeva’ and ‘Mita pala’. The performances of sacrifices is also indicated by the following phrases such as ‘Bata-Yaga-dataha’ (92) and ‘Parumaka Yaka dataha’ (1171). The performances of sacrifices also alluded to during the time of Pandukabhaya (M.V. X: 90).

There are about 33 inscriptions which suggest that the donors were of the Brahman caste. While 22 specially refer to ‘Bamanas’ (Brahmins), the names of 11 other epigraphs indicate their Brahmanical origin (Table 1). For instance Kacila (33) is the son of Bhraspati, Gadiya (727) is the father of sage Visvamitra, Ataka (99) is a composer of Vedic hymns and Kapila (803) is a common name among the Brahmins. Since teaching and education were in the hands of Brahmins, Paranavitana would even consider the terms such as Acariya and Aciriya (604, 803) as a reference to Brahmins. Brahmanical teachers and Pandits are mentioned in the literary sources as well (M.V. X: 70; SMP: 418). Purohita was an important office in ancient Sri Lanka as it was in India. References to this institution have been found from the time of Vijaya (Hettiarachchy, T. 1972: 109-110,130,174). However, no references of this nature occur in these inscriptions. Nevertheless various other professions of the Brahmins are also mentioned in them. (Table 1) The important Gotras of the Brahmanical caste too figure in these records. They are Kausika (48, 205, 632), Varsagana (1003), Potimasa (24), Paramasa (604) Gautama (486, 656), Vatsa (601) and Atreyya (545). Even some of the teras were of Brahmanical origin.
Brahmanical village is also indicated by the term ‘Brahmanaya gama’ (Paranavitana, S. 1970 : 12) Interestingly enough Mahavamsa too refers to the existence of a dwelling for the Brahmans (Brahmana-Vatthum) and a hall (Sotthisala) where the Brahmans recited Mantras (Sotthivacana) dating back to the time of King Pandukabhaya (M.V.x:102). The village of a Brahmin Tivakka/Tavakka (M.V.xix : 37) and a shrine belonging to another Brahmin Diyavasa (MBv : 137) are even alluded to during the reign of Devanampiyatissa. Thus, inscriptive evidences are confirmed by the references in the literary sources as well. Nevertheless these inscriptions do not suggest any evidence for the prevalence of the four fold Brahmanical caste system as an institution in ancient Sri Lanka (Karunatillake, P. V. B. 1986).

Of the Puranic cults, the most important is the evidence for the worship of Siva. The name of Lord Siva occurs in sixty nine inscriptions (Table I). This name has been used here singly, with prefixes such as ‘Maha’ ‘cuda’ ‘kala’ and with suffixes such as ‘butiya’ and ‘guta’ (Table I). Besides the royal personages Parumakas, Gamikas, Gahapatis, Batas, teras and lay worshippers of Buddhism having the name Siva figure as the donors of these caves. There is also a solitary reference to ‘Sivanagara’ (which means the town of Siva) in these epigraphs (796a). The literary sources also mention the use of name Siva by the Royalty as well. For, one of the sons of Panduvasudeva who succeeded Vijaya bore the name Girikanda Siva (M.V. x : 29). Even Devanampiya Tissa’s father was Muta Siva (M.V. xi : 1). Dhatuvamsa says that the ruling princes of Kalyani and Seru (Seruvilla) dating back to the time of Kakavanna Tissa (in the 2nd century BC) had the name Siva (Paranavitana, S. 1959 : 148-149).

At this juncture, it is relevant to take note of the reference to the shrines of ‘Maheja’ ‘Puradeva’ ‘Vyadhadeva’ and ‘Kammara-deva’ found in the literary sources. The Shrine of Maheja although occurs for the first time during the time of Pandukabhaya as Mahejijagara (M.V.x : 90), seems to have continued its existence up to the time of Devanampiya Tissa, (M.V. xvii : 30) till it got lost in the Buddhist monastery buildings established around the Thuparama (Paranavitana, S. 1929 : 307). It is probable that the Pali chroniclers confused the epithet ‘Mahesa’ of Siva which means the ‘Great God’ with Yaksa Maheja, as linguistically sa, ja are interchangeable. ‘Puradeva’ occurs for the first time during the reign of Dutthagamani (161 - 137 B.C.) (M.V. xxv : 87), as the guardian deity of
Anuradhapura. Most likely this is a reference to a Siva Temple. For, in the later period, the Temple of Siva as 'Nagarisa' which again is synonymous with 'Puradeva' has been located within the capital. Medieval text named Sadharmalamkara mentions a Temple of the guardian deity of the city of Anuradhapura as 'Puradeviyokoi' (Ariyapala, M.B. 1968: 192). Salalihini Sandesa too refers to a 'Isvara' (Siva) Temple in the city of Kotte during the reign of Parakramabahu I (1412 - 1467 B.C.) (Reynolds, C.H.B. 1970 : 286). That the god Siva was worshipped as 'Nagarisa' is also confirmed by the epigraph found at Devundra (Paranavitana, S. 1953 : 76). The form 'Visa deva' occurs in three epigraphs (Table I). Paranavitana has translated this as a reference to a person who honours all the Gods. Perhaps, Ellawala (1969 : 158) had taken this to mean Siva, the highest God.

Pandukabhaya is said to have settled 'Vyadhadeva' in a Palmyrah tree in the western gate of the city (M.V. x : 89). However, Malalasekara (1928) would treat this form as 'Vyadhideva'. Referring to Vyadhadeva, Parker (1909 : 177) opined that this is a reference to the hill God of the aborigines of South India and the knowledge of him was brought to Sri Lanka by the first comers in very early times. Nevertheless, it is probable that God Siva is here meant by the term 'Vyadhadeva'. For, he is referred to in Mahabharata as having assumed the form of a Kiratha (hunter) before Arjuna who performed a severe penance to obtain his grace (Keith, K. B. 1920 : 109). It is also very likely that the Pali writers, who had little or no knowledge about the nature of these cults have confused Palmyrah tree, the abode of Vyadhadeva. For, Banyan tree which again is the abode of Vaisravana (Vessanayana). Incidentally, it is also of interest to take note of the reference to Palmyrah tree in Mahavamsa immediately following the reference to a Banyan tree. Moreover, Patanjali refers to Siva in a compound sense along with the Vaisravana as Siva-Vaisravana (Banerjee, J. N. 1966 : 74).

The abode of Siva like that of Vaisravana is also a Banyan tree. Siva, in fact is referred to as Al-Kelu-Kadavul meaning the God having the Banyan tree as his abode (Vidyananthan, S. 1954 : 126). The city of Kubera, which is Alaka is believed to be situated in Mount Kailasa, the abode of Siva. If one takes the reading of this form as Vyadhideva mentioned above, which means the 'Lord of diseases' it again could be a reference to the 'Vaidyanatha' form of Siva, which means 'the lord who cures the diseases'. At present we are in the dark about the nature of the God Kammara-deva who has been identified as the God of Blacksmiths or Industries.
(Rahula, W. 1956: 40). He appears for the first time during the reign of Devanampiya Tissa MBV:84). The suffix 'Deva' appended with Kammara although would class him with the Puranic Gods mentioned above, however nothing could be said beyond this at present.

There are also references to the vahana (vehicle) of Siva as indicated by the forms such as Nadika and Vasaba/Vahaba (Table I) both mean 'Bull'. It may be recounted here that both Nandi and Nandipada are found in the earliest coins of Sri Lanka, namely the Punch-marked coins (Codrington, H.W. 1924: 16-20). Nandipada also occurs as a symbol in the same inscription where a person who bore the name Nadika (498) is referred to. It may be recounted here that there was also a king by the name of Vasabha, who reigned during 2nd century A.D. The abode of Siva namely 'Kailasa' is referred to as 'Kelasa' (1025) (Table I). Although it is mentioned here as a name of a cave, it is very likely that this indicates the prevalence of the tradition of Siva's mountain abode as Kailasa. However, the evidence from Mahavamsa shows the prevalence of the cult of the mountain during the Pre-Buddhist times (Rahula, W. 1956:41). This is referred to in connection with one of the earliest visits of lord Buddha to the Island (M.V.1). Referring to this mountain deity at Sumanakuta Sarachandra, (1966: 4-5) opined that 'we probably have an instance of an original mountain deity being converted to Buddhism and made the guardian (Sumano Deviya) of the sacred foot print'. Perhaps this original mountain deity could be identified with 'Siva' although Paranavitana had lately equated him with Kala (Yama) (Paranavitana, S. 1957). It is also of interest to note that Siva is also referred to as Kala/Mahakala in the literature (Williams, M. 1963: 277).

Although no names suggestive of the prevalence of the linga cult have been found in the Brahmi inscriptions, there are however both literary and sculptural evidence to this effect. The occurrence of the name 'Sivikasala' dating back to the time of Pandukhabaya (M.V. x: 102) had been taken as a reference to this cult (Paranavitana, S. 1929). However, there are terra cotta objects along with the female figurines discovered in many parts of the island which testify to the prevalence of this cult also (Deraniyagala, P. E. P. 1960: 61; Deraniyagala, S. 1972). Perhaps, it should be added here that the so called Phallic symbols are the survivals of the early phase of this cult, for during this phase these represented only the symbol of the formless almighty in the form of a lump of wood, clay and stone. It is believed that only later with the addition of argha or base to these, was this form rendered as
representing the male and the female organs of the human body (Subramaniampillai, G. 1948).

The worship of the mother Goddess is also evident from the use of forms such as *Macaka* (Minakshi) *Mahambika* (Ambika) *Duga* (Durga) *Guraya* (Gauri and *Kadi* (Kali) (Table I). These may be taken as references to Siva's consort Parvati. Paranavitana would derive the form *Macaka* from Sanskrit 'Matyaksi' which again is synonymous with *Minakshi*, consort of Siva, which means that 'whose eyes resemble that of a fish'. Finally it may also be remembered that Parvati, is also associated with Mount Kailasa. Now it is also relevant to state the important Yaksis mentioned in the Mahavamsa such as *Vadavamukhi* (M.V. x : 86) who was installed in the Royal precincts and *Pacchimarajini* (M.V. x : 89) who had the shrine at the western gate of the city as that of *Vyadhadeva*. This shows the importance attached to these female deities. Since the shrine of *Pacchimarajini* is mentioned along with that of *Vyadhadeva* (Siva) it is very likely that it is *Parvati*, consort of Siva who is alluded to in this form. In the context of the worship of elephant headed Ganesa in Ancient Sri Lanka one could reasonably assume that the mare-headed Goddess (*Valavamukhi*) was also worshipped at this time. For, *Skanda purana* mentions these Goddesses as bestowers of prosperity, givers of male issues to issueless women etc. Understandably enough the month of Magha too figures as an important month for the worship of Ganesa and the mare faced Goddesses (Dange, S.A. : 1983).

The references in these inscriptions to the names of God Skanda such as *Kadali* (Skanda), *Kumara* (Kumara), *Guda* (Guha), *Kita/Kati/Kritika* (Kartikeya) after the six mothers who nurtured him), *Visaka* (Visakha) *Mahasena* (Mahasena) *Samidatta* (Swamidatta) and Vela (Vela) could be taken as an evidence for the existence of the cult of Skanda/Muruga (Table I). Vela the shortened form of *Velan* could either mean Muruga himself for he is also a holder of *Vel* (lance) or the priests of the Muruga cult. In fact what is described as an iron blade from the Pomparippu excavations (Begley, V. 1981 Fig. 16a : 77) and a Spear blade from Pinewwa (Godakumbura, C.E. 1968 : 104) may be taken to represent a Vel. A Spear was also reported from Kantarodai excavations (pers. comm. Selvaratnam, T. P.). Incidentally Adichchanallur, an extensive urn burial site in Tamil Nadu with which Pomparippu urn burial site shares many common traits also has shown evidence for the prevalence of the Muruga cult. Similarly Vel also occurs as a graffiti symbol in the earliest Megalithic pottery of Anuradhapura (Deraniyagala, S. 1972:123 No.23).
In this context it is pertinent to say something about the Yaksa Kala Vela and Cittaraja who were visible in bodily form. Pandukabhaya is said to have settled the Yaksa Kala Vela on the east side of the city and the Yaksa Cittaraja at the lower end of the Abhaya tank (M.V. x : 84-88). This shows that the statues of these Yakas were housed in the two Temples at two different places in the city of Anuradhapura. With regard to Kalavela who, is not known from other sources (Paranavitana, S. 1929 : 306) it may be said that it is a component of two words Kala and Vela. Vela as we have noted earlier is a shortened form of Velan. The form Kala which again means black seems to have been used in a derogatory sense to qualify this Yaksa Vela. Not surprisingly Vattagamani (89 - 77 B.C.) of Sri Lanka was also nicknamed as ‘Mahakala Sihala’ by the Jains (M.V. xxxii : 44). It is very likely that Kala could then be an allusion to the God Vela by the chronicler who had no sympathy for this worship. If this is so it is also a sheer coincidence, that the king Mahasena who bore the name of the God Skanda, had the reputation as the destroyer of the shrines of Devas (M.V. xxxvii : 40) destroyed this shrine of Vela at Anuradhapura in the fourth century A.D. Paranavitana (1929 : 303-304) however, quoting from Kurudhamma Jataka would prefer an identification of Cittaraja with Kama, Hindu God of Love who is also as one of his name suggests ‘Manobhaya’ which means ‘mind born’ like Cittaraja. The other important element of this cult is the association of Karttika festival with this God. In fact this festival of lights which occurs in the month of Karttika is one of the Pre-Buddhist festivals of Sri Lanka (Hettiarachchye, T. 1972 : 120). However, it may be stated that the Yaksa Cittaraja shares many common traits with the God Muruga/Kartikeya. Like the word Cittaraja, Muruga also means young, handsome and pleasing to the mind/heart. Moreover the Karttika festival had been associated with Muruga from ancient times (Clothey, F.W. 1982 : 157-188).

It is also now relevant to say something about the Ksatriyas of Kajaragama and Candanagama who hailed from Rohana (M.V. xix : 54-55). However, both the places are not referred to in the Brahmi records. Both along with the Brahmin Tivakka figure in the lime light in connection with the planting of the Bo-tree at Anuradhapura and later the planting of the Bo saplings in their respective villages (M.V. xix : 54-55). This in fact reflects the recognition given to these people whose religion is Pre-Buddhist in origin and the entry of Buddhism into their respective areas. The persistence of the old tradition of the Muruga - Valli cult and the archaic form of worship followed at Kataragama are reminiscent of a similar type of worship
mentioned in the Sangam literature. These however, tend to associate this site with the Muruga cult. Sangam literature also associates Muruga with a mountain region known as Kurunci (Vidyananthan, S. 1954 : 115-125). This inference is further confirmed by the three inscriptions referring to Kumara which is a synonym of Tamil Murugan worshipped in and around Kataragama. The inscription at Avatigama (688) a hillock which is close to Kataragama mentions a tera named Kumara. Kumara also figures in the inscriptions at Kottamuhela (572) and Mangala (582) about twelve miles southeast and northeast of Yala respectively (Table I). In fact the epigraph at Mandagala even mentions two generations of the worshippers of Kumara. With regard to the origin of the word Kajaragama/Kataragama it has been postulated that it could either be a derivation from Karthikeyagama or Kathiragama which means the village of Karthikeya and the village of divine glory respectively (Arunachalam, P. 1924). At this juncture, it is pertinent to take note of the two Brahmi inscriptions of the first century A.D. left by Uparaja Naga referring to his conversion to Buddhism after having given up his false belief (Paranavitana, S. 1945). These have been found at Kirindi which is about twelve miles from Kataragama and at Magama (Tissamaharama) his royal seat which is also about ten miles from Kataragama. The inscription at Magama seems to be a confession on his part that he became a convert to Buddhism with the purpose of destroying the false beliefs in his village. However, it should also be noted that the word ‘false belief’ is (the term which is) often used in the Pali chronicles while referring to Hinduism (M.V. xxi : 34).

There is a solitary reference to Gana (Ganesa) in these epigraphs (Table I). Paranavitana who deciphered this inscription as ‘Ganesa lene Sagasa’ has rendered this as the cave of the corporation given to the Sangha. However, it is more plausible to take this form Gana as reference to Gana/Ganesa. The friezes of Ganas, especially a Gana with one tusk attended by other Ganas holding different objects at Kantaka Cetiya at Mihintale also, shows that the worship of Ganesa was prevalent in Ancient Sri Lanka (Ellawala, H. 1969 : 159). However, the figure of Ganesa datable to the middle of the 1st century BC occurring in the coins of the Indo-Greeks even takes back its origin to Pre-christian times in India (Narain, A. K. 1988).

The prevalence of the cult of Brahma, who is referred to as Bama in these epigraphs is also evident from the occurrence of this form in eight epigraphs (Table I). Interestingly enough even Bamanagama is referred to in one of these epigraphs.
(1037). However, numerically speaking next to Siva it was the cult of Visnu which was popular in Ancient Sri Lanka.

The name Visnu, however occurs as vinu in two epigraphs (Table I). Nevertheless, the reference to this cult could be found even in the time of Vijaya (M.V. vii : 5). For, Mahavamsa says that Saka (Indra) at the time of the arrival of Vijaya handed down the guardianship of Lanka to the god whose colour is that of a Blue lotus (Uppala vannasa). Geiger who translated Mahavamsa had identified him with Visnu. However, the form Utpala occurs as Upala in these epigraphs (Table I). Kana, another form of Visnu is referred to in eighteen epigraphs (Table I). Though Paranavitana (1970) derived this form from Sanskrit Krsna it could even be a derivation of Tamil Kannan who was later identified with Visnu (Vidyananthan, S. 1954 : 128). The influence of the stories of Krsna in the make up of the Pandukabhaya (Mencis, G.C. 1956) legends is again an evidence for the Knowledge of this cult in Ancient Sri Lanka as well.

The other forms of Krsna such as Gopala and Narayana occur in a single inscription respectively (Table I). There is no reference to the cult of Vasudeva another form of Visnu in these epigraphs published by Paranavitana. However, Ellawala (1969 : 159-160) quoting from an inscription found at Valakumuvava cave from north central province published by Paranavitana earlier and which has been deciphered by him as ‘Bata-Vasudeva lene’ convincingly argues for the presence of this cult also in Ancient Sri Lanka, although Paranavitana has failed to include this inscription in this volume. Finally Ellawala says that in the later period this cult was known to the people of Sri Lanka too, for in the Dhammasangani Atthakatha reference is made to Vasudeva yatana. Tantalisingly enough, one of the earlier kings, the grand father of Pandukabhaya bore the name ‘Panduvasudeva’ where ‘Vasudeva’ occurs along with the clan name Pandu. While Baladeva or Balarama, brother of Visnu found a place only in one epigraph (Table I) the form ‘Naguli’ which also meant the same occurs in six epigraphs (Table I). In India he was associated with the Palmryr palm. Banerjee (1966) even includes taladhvaja (palmryr shaped capital of Baladeva) as denoting the worship of Visnu in North India. In the Sangam Literature too Baladeva is referred to as a bearer of a plough who had the palmryr palm as his flag (Vidyananthan, S. 1954 : 133-134). Rama and Kurma (tortoise incarnation of Visnu) also figure in these epigraphs (Table I).
Visnu's consort 'Sri' also had her followers as it is evident from the occurrence of this name in these epigraphs. In one inscription Goddess 'Laksmi' another name of 'Sri' is referred to as Laci (Table I). The form 'Sri' however occurs as 'Sri' 'Sripaliya' and 'Sriguta' in these epigraphs (Table I). Paranavitana even equates Sanskrit 'Sri' with Tamil Tiri, which he has read as Tiri (Table I). Paduma (Skt. Padma) another name of Laksmi occurs in two places in these records (Table I). It is also pertinent to remember that the Goddess Laksmi has been depicted as standing on a lotus in the ancient coins usually designated as Laksmi plaques (Codrington 1924 : 26-31). The Yaksi figures having lotuses in hand found at Abhayagiri and Jetavanarama (Paranavitana, S. 1971 : Pl. 5) may be taken as the early representations of the Goddess Laksmi. The word Sri/Siri was also added to the names of the Kings such as Siri Naga, Siri Sangabodhi (Hettiarachchy, T.1972:63).

The fact that the people of Pre-Buddhist Sri Lanka were accustomed to the Hindu way of life is perhaps evident from the references to astral names used as proper names. The following nakṣatras are found in these inscriptions. They are Bharani, Krittika, Rohini, Punarvasu, Pushya, Aslesa, Magha, Uttarā, Hasta, Citra, Svati, Visakha, Anuradha, Mula, Asadha, Uttarāsadha, Abhijit, Sravana, Sravīscha and Revati. Of these Pushya and its synonym Tissa occurring in about seventy five and fifty inscriptions respectively taken together far outnumber in their occurrence all the other Nakṣatra names put together (Paranavitana, S. 1970 : CXXIV). We are still not quite certain as to what the author of the Mahavamsa meant by his reference to five hundred families of heretical belief (Michaditthikula) living in Anuradhapura (M. x : 100). Pandukabhaya seems to have constructed buildings for the Sramanas (ascetics (M.V. x : 96) and monastery for the Parībhatakas (Parivrajakas) and the house for the Ājīvakas (M.V. x : 101-102). It is also of interest to note that these occur along with the dwellings for the Brahmins, Sotthisala and Sivikasala. Could then ascetics be equated with the Rsis? The Rsis are referred to in these inscriptions as Isiguta (174) and Isi-rakita (614). With regard to the Parībhatakas and Ājīvakas Banerjee (1966 : 91-92) sees their link with the Pasupathas (a sect of the Siva cult). However, Parībhatakas are even referred to in the Vijaya and Panduvasudeva stories (M.V. vii : 6 ; viii : 24). Saddharmalankara refers to Saivite Parībhatakas (ascetics) living in Rohana even during the medieval times (ARIyapala, M.D. 1966 : 183-185). Baruna (1986) however, opines that Siva was the highest deity to the Parībhatakas and the wandering ascetics.
The above study indicates that a large number of Brahmi inscriptions are found in the Dry Zone districts only. For, these were the areas of early settlements in Sri Lanka. The presence of suitable rock formations was no doubt the only factor responsible for the creation of these caves and later the inditing of inscriptions in their dripledges. The absence of inscriptions in the northern districts excluding the district of Vavuniya and in the wetzone districts of Kalutara, Galle and Matara may be explained this way. Nevertheless it should also be stated that the coming of Buddhism did not mean the end of Pre-Buddhist beliefs especially Hinduism in Sri Lanka. Instead of eradicating them, it had accommodated them to a certain degree assimilated them too. Hindu Gods became part and parcel of Buddhist establishments. In short, the folk religion of the Buddhists perhaps bespeak the old Hindu heritage, though in a different garb. Finally, we would like to state that in this paper a study of the non-Brahmi symbols occurring in the epigraphs quoted above has been avoided for want of space. This may form a separate paper. ..... 

Grateful thanks are due to Prof. V. Sivasamy, Dept. of Sanskrit and Mr. A. J. Kanagaratne, Department of English for going through this paper and making valuable suggestions. A special word of thank is also due to Mr.S. T. B. Rajeswaran, Senior Lecturer in the Departemt of Geography for the preparation of the map attached to this paper.
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BRAHMI INSCRIPTIONS WITH THE
NAMES OF BRAHMINS PURANIC
GODS/GODDESSES AND THE
NON-BRAHMI SYMBOLS

(for details, see table 1)
TABLE 1

KEY TO THE FIGURE I

Sri Lanka is divided into 25 districts. They are Amparai (A), Anuradhapura (An), Badulla (B), batticaloa (Ba), Colombo (C), Galle (G), Gampaha (Ga), Hambantota (H), Jaffna (J), Kalutara (K), Kandy (Ka), Kegalle (Ke), Kilinochchi (Ki), Kurunagala (Ku), Mannar (M), Matale (Me), Matara (Ma), Monaragala (Mo), Mullatuvu (Mu), Nuvara-Eliya (N), Polonnaruwa (P), Puttalam (Pu), Ratnapura (R), Trincomalee (T), Vavuniya (V). However the Brahmi inscriptions with the names of Brahmins, Puranic Gods and Goddesses are found only in the following districts.

<table>
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<td>(1) 545. Kongala</td>
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<tr>
<td>Bana origin</td>
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<tr>
<td>Gotama tera</td>
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<tr>
<td>(2) 486. Kaliode</td>
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<tr>
<td>Gahapati Siva</td>
</tr>
<tr>
<td>(3) 518. Bambaragastalava</td>
</tr>
<tr>
<td>Upasaka Siva</td>
</tr>
<tr>
<td>(4) 478. Damana</td>
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<tr>
<td>Upasika Siva</td>
</tr>
<tr>
<td>(3) 1178. Bambaragastalava</td>
</tr>
<tr>
<td>tera Siva</td>
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<tr>
<td>(5) 431. Rajagala</td>
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<td>(5) 449. &quot;</td>
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<tr>
<td>(5) 450. &quot;</td>
</tr>
<tr>
<td>Bata Siva</td>
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<tr>
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<tr>
<td>(7) 537. Veheragalkanda</td>
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<td>(6) 402. Niyandavaragala</td>
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<tr>
<td>Parumaka Kana</td>
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<tr>
<td>(12) 531. Viharegala</td>
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<td>(12) 532. &quot;</td>
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<tr>
<td>Parumaka Nadika</td>
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<tr>
<td>(8) 498. Kudumbigala sym. 18</td>
</tr>
<tr>
<td>Tera nadika</td>
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<tr>
<td>(5) 457. Rajagala</td>
</tr>
<tr>
<td>Upsika Sami-data</td>
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<td>(9) 417. Miyunguna Vihara</td>
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<td>Parumaka Vela</td>
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<td>(10) 477. Uhapitagalge</td>
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<td>(11) 403. Omunagala</td>
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<td>(12) 529. Viharegala</td>
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<td>(12) 535. &quot;</td>
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<td>Aciriya</td>
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<td>Acariya</td>
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<td>(13) 748. Mavaragala</td>
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<td>(13) 749. &quot;</td>
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<td>Gapati-Nagul(Baladeva)</td>
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<td>(14) 421. Tisnulaakra</td>
</tr>
<tr>
<td>(2) 484. Kaliode</td>
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<td>Asa tera Siri</td>
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<td>(12) 529. Viharegala</td>
</tr>
<tr>
<td>(12) 535. &quot;</td>
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</table>
Asiya Siva
(6) 401 Niyandavaragale
Gapati-Visaka
(9) 413. Miyunguna-Vehara
Uppasika Kana (Krishna)
(9) 415. Miyunguna Vehara
.9) 420. "
Uppasika-Uppala (Utpala)
(15) 475. Vadinagala
Ati Acariya GamaniPaduma
(16) 494. Navalar Kulam
sym. 29, 30

ANURADHAPURA (An)

Bamana
(1) 67. Rajakirikanda - Mihintale
(2) 124. Handagala Vihara
(3) 242. Ritigala Andya Kanda
(1) 1111. Mihintale

Bamana Kosika
(4) 205. Yangala

Badata-Bamana
(5) 228. Maha Alagamuva

Parumaka Bamana
(2) 1136. Handagala

Bamana origin

Parumaka Potimasaha
(1) 24. Mihintale
Kosika (Kausika)
(6) 98. Ruvanvalisaya

Gapati
(7) 99. Radagama

Gapati kecili
(1) 33. Mihintale

Gahapati-Cuda Siva
(5) 215. Maha Alagamuva
Upasika-Siva
(2) 1137. Handagala Mahā
(5) 1156. Alagamuva symb. 36
Bata Siva
(3) 243. Ritigala Andiya Kanda
Nadika (Nandika)
(10) 148. Brahmanayagama
Parumaka Nadika
(10) 153. Brahmanayagama
(11) 166. Nattukanda symb. 14
(5) 233a. Maha-Alagamuva
(5) 233b. " "
Parumaka Visa-deva
(8) 88. Vessagiri
Bata Visadeva
(12) 136. Valaskunu vava
Parumaka Guda/Guha
(2) 1138. Handagala
(2) 1140. "
Upasika Kati-Kita (KrttiKa)
(1) 4. Mihintale
Kati
(15) 193. Kesavakanda
Parumaka Vela
(2) 1125. Handagala
Upasika Visaka
(1) 5. Mihintale
Gana (Ganesa)
(16) 201. Vanasimhavihara
Bana (Brahma)
(3) 268. Ritigala-Vevaltanna sym. 1,
19, 21, 21a, 21b.
(3) 269. Ritigala-Vevaltanna sym.
22, 23, 24.
Gamika Bana
(17) 117. Rasnakava

303
Siva
(6) 98. Ruvanvalisaya symb. 1 & 22
(8) 1120. Vessagiri
(9) 1149. Avukana
Aya Siva
(1) 29. Mihintale
Parumaka-Siva
(10) 152. Brahmanayagama
(10) 153. "
Gamika Siva
(1) 40. Mihintale
(Gamika Kuda Siva
(10) 161c. Brahmanayagama

Ambika
(1) 37. Mihintale
Upasika Kadi (Kali)
(13) 1118. Billavegala
Parumaka-Kadali-Skanda
(3) 264. Ritigala Marakkala Ulpota
(3) 266. "
Parumaka Kumara
(8) 91. Vessagiri
Bata Kumara
(14) 190. Kuttikulama

Parumaka Bama
(2) 130. Handagala Vihara
Kanagama (Krsna)
Parumaka-Kadali-Skanda
(1) 14. Mihintale
(1) 15. "
Abi Kuna
(1) 18. Mihintale
Rajah Kana
(18) 111. Occappukallu
Parumaka Narayana
(19) 171. Galkandegama
Upasika Rama
(1) 31. Mihintale
(10) 159. Brahmanayagama
Parumaka Naguli (Baladeva)
(3) 260. Ritigala
Upasika-Upala (Utpala)
(1) 40. Mihintale

BADAULLA (B)

Raja-Siva
(1) 756. Olagamgala
(1) 757 "

Siva-Aya
(1) 757. Olagamgala

Bama/Brahma
(2) 758. Bogoda Raja- Maha Vihara

HAMBANTOTA (H)

Gamika Siva
(2) 623. Situlpava
Koravakgala

Kumara (Skanda)
(6) 575. Kottadamuhela
Bamana Vaca (Vatsa)
(2) 601. Situlpavuva
Bamana Gotama (Gautama)
(2) 656. Situlpavuva Dekundaravava
Bamana origin
Kosika (Kausiki Gotra)
(2) 632. Situlpavuva Koravakgala
Acariya Parasarisê
(Parasara Gotra)
(2) 604. Situlpavuva Siva
(2) 608. Situlpavuva
(2) 660. " Dekundaravava.
(2) 624. Situlpavuva Koravakgala
(2) 625. "
Gahapati-Siva
(3) 679. Magul-Maha-Vihara
(4) 685. Akasaeeetuta Tera-Siva
(2) 608. Situl pavuva Bata-Siva
(2) 626. Situlpavuva Koravakgala
(2) 633. " Parumaka-Nadika
(5) 667. Gonagala Gamika Vasaba (Vrsabha)
(1) 578. Mandagala Sata Vahaba (Vrsabha)
(2) 1180. Situlpavuva Upasika-Guraya (Gauri)
(2) 606. Situl pavuva

KANDY (Ke)

Bamana
(1) 812. Molagoda
(2) 814. Bambaragala
Parumaka Siva
(3) 808. Dulvala
Upasaka Kumara
(4) 807. Vegiri-devale

KEGALLA (Ke)

Bamana origin
Gamani Siva
Gamika-Siva
(1) 803. Divela

Siva
(2) 796a. Yatahalena Vehera

Aya-Siva
(3) 786. Lenagala
(2) 792. Yatahalena Vihara
(2) 795.

KURUNAGALA (Ku)

Baman
(1) 1045. Diyabatta Vihara
(2) 1194. Ranagiramada

Baman Vasakini
(3) 1003. Sasseruva

Baman origin
Parumaka Vahiti
(4) 1202. Kaduruvava

Siva
(5) 1201. Karagavava

Parumaka Siva
(1) 1044. Diyabatta Vihara

Gamika Siva
(6) 952. Rangirivihara
(7) 966. Kombuva
(8) 970. Dagama
(13) 914. Nuwarakanda

Bata-Siva
(3) 1001. Sasseruva

Gamika-vasaba (Vrsabha)
(13) 916.

(2) 962. Ranagiramada

Parumaka
(Visa-deva)
(6) 953. Rangiri-Vihara

Kelas (Kailasa)
(11) 1025. Gallena-Vihara

Parumaka Sivaka
(10) 889. Delvita

Bana-nagara-bojhika
(12) 1037. Terava-Mayilaya

Upaskar Vinu (Vishnu)
(12) 1217. Terava-Mayilaya
(12) 1218.

Upaskar Naguli
Upisika Upala (Utpala)
(13) 921. Nuwarakanda
(15) Talapiti Yava Vihara

Gamika Kana
(13) 914. Nuwarakanda

Gamika Vasaba (Vrsabha)
(13) 916.

Aciriya Kana
(4) 991. Kaduruvava

Paduma (Padma)
(3) 1013. Sasseruva

Parumaka Gopala
(4) 992. Kaduruvava

Parumaka Visaka
(10) 889. Delvita

Bana-nagara-bojhika
(12) 1037. Terava-Mayilaya

Upaskar Vinu (Vishnu)
(12) 1217. Terava-Mayilaya
(12) 1218.

Upaskar Naguli
Upisika Upala (Utpala)
(13) 921. Nuwarakanda
(15) Talapiti Yava Vihara

Upasaka Kumudata (Kur-madatha)
(5) 984. Karagavava

Batanaguli (Baladeva)
(14) 911. natagane

Gamika naguli
(8) 972. Dagama

Upasaka Naguli
Upisika Upala (Utpala)
(13) 921. Nuwarakanda
(Padma)
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<th><strong>MONARAGALA</strong> (Mo)</th>
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<td><strong>Parumaka Bana</strong></td>
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<td>(1) 838. Dambulla</td>
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<td><strong>Siva</strong></td>
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<td><strong>Gadika</strong></td>
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<td>(1) 7727. Valaellugoda Kanda</td>
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<td>(4) 873. Piduragala</td>
<td><strong>gīva gutta</strong></td>
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<td><strong>Tera-Siva</strong></td>
<td>(5) 761. Balahurukanda</td>
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<td>91) 941. Dambulla</td>
<td><strong>Upasika-Macaka (Matsyakshi)</strong></td>
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<td><strong>Upasaka Dagu (Durga)</strong></td>
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<td>(5) 1185. Enderangala</td>
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<td><strong>gīva gutta</strong></td>
<td><strong>Abi Upala (Utpala)</strong></td>
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<td>(5) 761. Balahurukanda</td>
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POLONNARUWA (P)

Parumaka Bamana
(1) 296. Kandegama Kanda
(2) 301. Mutugalla

Siva
(1) 282. Dimbulagala: Maravidiya
(2) 309. Mutugalla
(3) 316. Mutugalla

Aya-Siva
(1) 282. Dimbulagala: Namalpokuna
(2) 313. Mutugalla
(3) 321. Lunuvaramaga

Gamika-Siva
(2) 304. Mutugalla

Abi-Upala (Utpala)
(3) 272. Dimbulagala: Upasika Sri (paliya)

Ganapati-Siva
(4) 321. Lunuvaramaga

Tera-Siva
(2) 303. Mutugalla

Parumaka Kumara
(1) 282. Dimbulagala: Upasika Utpaliya (Utpala)

PUTTALAM (Pu)

Vejha Bamana Gobutiya
(1) 1059. Piccandiyava
(2) 1060. Piccandiyava
(1) 1065. Piccandiyava

Aciriya Samana Gobutiya
(1) 1060. Piccandiyava
(3) 1097. Virandagoda
(1) 1233. Piccandiyava

Bamana
(1) 1059. Piccandiyava
(1) 1062. Piccandiyava

Bamana origin
(1) 1233. Piccandiyava

Amate Vahitimataha
(2) 1231. Paramakanda

Siva bulti
(4) 1069. Mullegama

Parumaka Siva
(1) 1062. Piccandiyava

Bata-Siva buti
(4) 1069. Mullegama

(3) 1097. Virandagoda

Kumara
(1) 1233. Piccandiyava

Mahasena
(1) 1064. Piccandiyava

Asiya-Sivabutiya
(1) 1067. Piccandiyava

RATNAPURA (R)

Aya/Maha Siva
(1) 768. Kirimakulgolla
(2) 780. Galpaya

Gamika-Siva
(3) 781a. Bambaragala

Gamika Vasaba (Vrsabha)
### TRINCOMALEE (T)
Parumaka Vahaba (Vrsabha)
(1)1171.Seruvavilla

### VAVUNIYA (V)

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<th>Parumaka Rana-(Brahma)</th>
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<td>(3)356.Periyapuliyan (4)373.Vedikkinari-mala kulam</td>
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<td>(2)322.Mahakocaatkodi</td>
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Rama

(3)357. " "

(3)347.Periyapuliyan kulam.
Word Processing By The Department Of Archaeology.

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