

THE ORIGIN OF THE ART OF WRITING IN INDIA AND THE SRI LANKAN EXPERIENCE

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Introduction

It is believed that a set of characters and an art of writing were transferred from ancient India to Sri Lanka which paved the way to the emergence of Sinhala characters. Therefore, this paper is aimed at examining the origin and evolution of characters and the art of writing in India and its relationship with Sri Lanka. According to the researches carried out by the pre-modern archaeological, paleographical and linguistic researchers on this subject, it would be possible to arrive at fascinating conclusions.

It is commonly believed that the emergence of Sri Lankan alphabet and the art of writing coincided with the arrival of Arhat Mahinda in the 3rd century B.C. However, certain modern scholars are of the opinion that the Brahmi script had been in use prior to this event. This view however has not so far been firmly established. Therefore, an attempt will be made in this paper to make an analytical study over the expansion of the Brahmi alphabet and the art of writing in Sri Lanka as well.

The scholars are of varied opinions and some claim that art of writing was of local origin and yet others say that it was of foreign. With regard to the time-span of the origin of the Indian alphabet and the art of writing, the prevailing conclusions also vague and evasive. Therefore, an examination as to how the art of writing originated is timely. A close analysis of the local and foreign historical sources, travelers reports, paleographical and archaeological evidences have to be taken into consideration in this study.

Origin of Brahmi Alphabet

In any language, there is some sort of duality, spoken and written. It is of common acceptance among linguists¹ that in any society, the oral form of the language first came into being and along the passage of time, evolved the written language. There exists adequate archaeological evidence including prehistoric cave paintings to substantiate this view.² According

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to anthropologists³ E. B. Tylor and L. H. Morgan, the art of writing and urbanization grew in parallel to each other during the early days of human civilization. Gordon Child is of the opinion, "The art of writing is a by-product of the urban revolution which resulted in a civilization with historical documentation."⁴ This implies that the art of writing emerged entirely in keeping with the developments of the economic system that associated with the urban life. The calculations and measurements (*mudda, ganana*)⁵ in mathematics are especially linked with the commercial activities of the urban life have a close relationship⁶ with the art of writing. There is a considerable flow⁷ of raw materials from traders into the art of writing and mathematics. If this argument is to be accepted in relation to India, it should also be fair to consider the writings of the Aryans in the northern India. Therefore, it could be argued that the emergence of an urban culture along the valley of Ganges and the growth of commercial and economic institutions had some influence over the birth of the art of writing in northern India. The Sanskrit alphabet *devanagari* 'script of the God city' named by the Brahmins illustrates the urban relationship of the art of writing. According to the concepts of Brahmin, the sacred or the pure Sanskrit language *devanagari*⁸ is the language of the divinity which is capable of reproducing sounds into writing. According to the Indian tradition, the Brahmi writing⁹ or the alphabet created by Maha Brahma is considered one of the oldest national products of the Indians. Baruni states that the Hindus once forgot the art of writing. Then Vyasa, the son of Parasa through his divine wisdom made it known in 1301 B.C. This mythical view can be rejected outright as it is a mysterious fiction.

A detailed study of Jain, Brahmin and Buddhist religious literature combined with the other archaeological factors including inscriptions could be made use of at this instance. Regarding the origin of the Brahmi alphabet, the *Samavayanga Sutra* and *Pannavaha Sutra* of Jains refers to 18 different alphabets, whereas the *Lalithavisthara* by *Sarvasthivadians* in the 1st century A. D. refers to 64 alphabets extant at the time of the Buddha. The *Mahayana* works namely, the *Mahavasthu* mentions 30 alphabets. These are virtually similar to each other and four out of them have been identified as historical alphabets, namely *Brahmi*, *Kharosthi*, *Puskarasari* and *Yavanaliya* or the Greek. In these, it has been mentioned that Brahmi is the most important alphabet. The *drushtivada* of Jains, mentioned that Brahmi alphabet has 46 basic characters.¹⁰ Hiuen Tsiang states that the Brahmi alphabet remains intact over the generations and it has 47 characters. It could be possible that the letter *kshā* was added to the above 46 characters or it was a lapse in computation. On an *Asoka* inscription at *Bodhgaya*, finds a Brahmi alphabet of which the characters resemble to those of the alphabets referred to above.¹¹ If a study is to be made on the north Indian Buddhist tradition, the statements of Panini and the epigraphic factors, the details given in *Jains sutra* cannot be ruled out. According to their historical evidences, it is clear that the Indian alphabets including Brahmi have been widespread during the 3rd century B.C.

According to *Kumarila* (c. 750 B.C.), the *Vashishtasloka* (XVI 10.14-15) in the *Vashista Dharmasastra* of the *Rig-veda* make reference to written records. Panini's Grammar of the Vedas includes the word *yavanani lipi* and the compounds, *lipikara* and *libikara* (writer) (III 2.21). The post-Vedic writings include the words such as *akshara*, *patala* and *grantha*.¹² Ojha, in his

analysis of Vedic literature has stated that *Upanishad* and *Aranyaka* contains information on letters, vowels, consonants, sonants (*ghoshakshara*), nasals and dentals.¹³ He further states that *Om* in *Aitareya Brahmana* (5.32) has been used to make letters of **a**, **u** and **m**. Muller is of the view that *yavanani lipi* means a type of one character that derived from the Semitic alphabet which existed even prior to Alexander the Great and Panini. While explaining the words *varna* (letters), *akshara* (characters) and *virama* (punctuation) in Panini's work, Muller says that the words *lipi*, *dharma lipi* and *lipikara* are of Buddhist origin. He further states that the word *lipikara* alone in his records justify that Panini was engaged in writing activities.¹⁴ The Old Testament of the Bible and Herodotus' essays refers to writing and the writing material such as papyrus, barks, chips and skins, however, the Vedas make no mention of them. No early work of *Aryavarttha* refers to writing material such as papers and pens. **Sarasvathi** (the goddess of speech) and **Pooshan** (the god of agriculture) had been existed in their respective areas however no god had been assigned for writing. The works of literature, according to Muller, do not make even a single such note on writing. He says that the Brahmins would have never engaged in writing however, there could have been some writers about a century before the Asoka era. Muller¹⁵ is of the view that when Brahmins transmitted their literature from one generation to the other, made use of their memory to repeat it orally. Buhler has pointed out that the post-Veda and the Upanishad has references to the art of writing.

While negating the Muller's view, Goldstucker says *yavanani lipi* meant by Panini were Persian writings and cuneiform that had already been known before Deriyas. **Panini**, the most distinguished grammarian of India had lived before the Buddha, and had a wide knowledge on writing linguistically and syntactically. Accordingly, Goldstucker¹⁶ concluded that Panini as well as the writers of **Rig-veda** and the Vedic Aryans lived in a civilized society where the art of writing, science and law had reached a higher plane. The words such as *akshara* (letters) and *varna* (letters) found in Veda further proves this point. *Vathsyayana* says that *yavanani lipi* is a name used for *yavana* alphabet (Greek).

Vincent Smith¹⁷ states that Indians were great memorizers before the art of writing spread over India as a result of maritime commercial activities in 7th century B.C. Even at present, the traditional Hindus prefer to use of oral language than writing. The possible reason for this could have been their spiritual and scientific influences connected with the oral communication. Their traditional literature or manuscripts carry less reference to the art of writing. The Hindus admire the oral learning (*mukhastha vidhya*) from the teachers of Vedic literature and consider the face of the goddess of scripts as that of Sarasvathi (*Sarasvathi Mukha*) a symbol of respect. For example, they consider recitals of the stanzas as a valuable ornament for their throat (*sathankantabhushanam*). The practice of the oral method is however, not the sole factor to conclude that the writing did not exist in that era.

There exists no barrier to infer that writing was used in oral advice and academic activities in early Vadic India. It can be presumed that writing existed especially in the works of Traditional Brahmin schools (*gurukula*). The phonologists and the grammarians made use

of the Brahmi alphabet for scientific works. The early inscriptions provide information on two long poems (*dirga kavya*). Jacob who analyzed several editions of the *Ramayana* concluded that many poems used in modern edition do not belong to its original. A great many chapters of the *Mahabharata* belong to 11th century A. D. and this indicates that it was written only with a view to preserve ancient poetic tradition. The modern writers did not have an adequate awareness of the expressions, words and the language that had been used in ancient times.¹⁸ Reading of the manuscripts included in the sixty four arts and crafts of the *Kama Sutra* of *Vatsyayana*¹⁹ yet it is another art that was practiced even at a low profile. The Indian literature, remains with a problem relating to chronology. W. C. Whitney²⁰ suggests that it is necessary to amend the chronological orders given in the Indian history. The chronology in Indian history is a relative one and some scholars vary from 2 and 3 years or even to hundred or thousand years. When Vedas are separated from their post-writings and taken as a whole remain creations prior to the Buddhist era (i.e. about 500-600 B.C.). However, in this respect the Buddhist and Jain literature do not remain vague as Brahmin literature.

Chandraguptha defeated Alexander the Great who invaded India in 315 B.C. and became the king of Pataliputra in 326 B.C. During this period, Cellieucos sent Megasthenes to Pataliputra city. The king Chandraguptha expelled Pushyamithra, the last of the royal descendent from the throne (178 B.C.). There is a reference to Pushyamithra in one of the dramas of Kalidasa and this is an important factor regarding the chronology of Indian literature. The reference in *Milinda Pangha* to Minandar alias Milindar, a Greek Bactriyan king who ruled in 444 B.C. is yet another indicator. Strabo who quote the records of Megasthenes says that there were 40,000 men in Chandraguptha's camp and the value of thefts that Megasthenes had recorded per day did not exceed Drachmae 200 and the posts were erected at a distance of 10 stadia each to indicate the byways of the main road of the Pataliputra city. He further states that the Indians did not have an art of writing, there was no written law and everything was done by memory. He²¹ also records that the administration in Pataliputra was well organized. These views are contradictory. Buhler says "People like Megasthenes are some of the writers who have shown least concern over Indian history."²² Megasthenes' reports indicate that there had been some sort of art of writing was in existence there.

After Greeks, since 1st century A.D. the Chinese started presenting facts about India and made statements on the time frames during which the Indian works of literature were translated into Chinese language. Fa Hsein who visited China c. 399 A.D., Hiuen Tsiang who travelled to India c. 630-645 and It Sing who stayed in India between 671 and 695 A.D. have made references to the art of writing in India. Albaruni, an Indian national who compiled an essay on India in 1030 A.D. says "Unfortunately, Hindus did not show any concern about historic methodology. When they concern chronological order of their kings, become very careless and if such details are insisted they pretended ignorant but rather deviated from the subject."²³ What he says is, it is not that they unaware of an art of writing but they were not interested in historical annotations. Therefore, we must draw attention to Winternitz²⁴ whose view is that the art of writing is not a

product of an early period of Asoka, but it has a longer history than that. It is not only the Vedic literature that mentions about the books, writing and reading of books or copy-writing. Even the *Mahabhasya* by Pathanjali in 2nd century A.D. does so directly. This fact too is not a strong enough to imply that the art of writing did not exist in India between the 5th and 6th century B.C.

The non-availability of writing materials, absence of an urgent need for writing, the reluctance of the clergy for recording the religious works and deeper respect for the use of language than for the writing could have prevented spreading it. In the writings of the Brahmin law, it is mentioned that the people who belonged to the low castes (*Sudra, Chandala*) were completely banned from learning the holy works. **Gautama's** ancient work of law, has recommended the death penalty for the violators of this law. It says, "If a *Sudra* listens to Veda, his ears must be poured with liquid metal (*lodiya*) and heated wax (*laksha*) (sealing wax). Accordingly, they have kept their religious literature concealed as much as possible and it is said that in the 7th century B.C.,²⁵ they commenced spreading religious literature orally. The Hindus learnt the religious texts orally from their teachers. Therefore, upon the ancient traditions and beliefs of the Brahmins, it cannot be exactly said that there were no contemporary records. The characteristics of the Vedic civilization, growth of commercial activities, complex monetary transactions, the expressions of the Brahmins, collections of Vedas and their methodical arrangement, calculations and measurements, analysis of the Vedic lines, the grammatical, linguistic and lexicographical analysis underpin that there existed a method of writing. However, as already pointed out, one cannot ignore the fact that the Hindus even now respect the use of oral language much more than the writing. The reason for this was not the absence of an art of writing at the time but the spiritual and traditional facts that influenced the use of oral communicative method. Another obvious factor is that their scientific works scarcely made reference to the writings and the manuscripts.

There is no definite chronology for Vedic literature, but various relative chronological orders have been emerged. While Max Muller²⁶ limits the origin and the growth of Vedic literature to 1200-1000 B.C., Tilak and Yacob based on astrology says the **Vedic Suktha** was written in 4500 B.C. The opinion of Radha Krishnan²⁷ is that it was compiled in 5th century B.C. It is mentioned that in works of Buddhist literature, the Vedic literature appeared with the parts of Brahmanas and Upanishad at a developmental stage. This helps to decide the recent chronology of Vedic literature. Winternitz²⁸ who does not accept the chronology of Muller shows links between the **Rig-veda**, and the **Avestava**, one of the oldest religious works of the Iranians and says that they originated during the period of 2500-2000 B.C. Vedic literature has been categorized into four main groups, namely **Mantra, Brahmana, Arannyaka** and **Upanishad**. Again the sub-group **Mantra** has been classified into four groups, namely **Rig-veda, Yajur-veda, Sama-veda** and **Atharvan-veda**. One charmer exclaims: "I am a composer of charms and my father is a physician and my mother grinds flour with a grind stone. We all are engaged in varied employments."²⁹ (Rig-veda IX, 112, 113). This indicates that the writing was in existence, and was a source of employment. The Brahmin concept was that it should be kept hidden from the common people and the Sudras and reading it slowly should preserve it. The growth and development of the art of writing was thus taking place

at a very slow pace. Any carbonic materials used should have got destroyed with the passage of time. Some records of the foreign travellers narrate that the natives had used organic materials for writing about 4th century B.C. According to Nearchos, the Hindus drew letters on cotton clothes. Q. Curtius of the view that they had scratched letters on the birch barks. Megasthenes states that there were posts erected along the road to Pataliputra city to indicate the distance and the resting places. The engraving of letters on materials like stone was extant at the time.

The Vedic literature refers to *Ashtakarni*³¹ cows meaning “they have eight figures branded on their ears”. This fact supports that the writing existed during the period of our discussion. There is a school of thought that the contemporaries of **Rig-veda** did not know writing and the art of writing spread prior to the era of Asoka and the characters have originated from the Semitic but not from the Aryan groups. Another group of scholars are of the opinion that the people who lived in the Indus-valley had practiced some form of writing. The Aryans made use of the oral method as the carrier of their Vedic literature. This factor is not strong enough to conclude any non-existence of writing at the time. It is an assumption made only after considering the Brahmin religious literature.

The writing is often linked with the urbanization process. The works of the early Buddhist sects contain more factors regarding the use of writing than the Jain and Brahmin religious literature. According to *Vinaya Pitaka*, the parents of Upali, who lived in the city of Rajagaha, the capital of Magadha, which had acquired an urban culture, paid attention to the art of writing. The parents looked for a suitable career for their son as it was considered useful for livelihood. The hopes of this was later abandoned for the reason that his fingers would become weary.³² If there had been a rural agrarian set-up in region of Magadha, the art of writing would not have got spread in keeping with the developing urban economic set-up at the time. During the early period, when many paleographers did research on the ancient art of writing, the researches carried out in the Ganges valley were at their infancy.³³ Recent researches have revealed that it is doubtful whether there existed any art of writing in 500 B.C. or around this period in the region of Ganges valley.³⁴

According to the radio-carbon dating, it is generally acknowledged that the Aryan urbanization took place in 500 B.C.³⁵ in the central province of the Gangaes valley. Wheeler argues that there was no sufficient evidence to establish that there had been a long-term colonization in this province before 5th century B. C. The latest discoveries of Raymond and Bridget leads to conclude that even though there had not been inscriptional evidence it is possible to surmise that the art of writing was in use during the early period of this era.³⁶ The early Buddhist literature too has references that the art of writing was in practice in the ancient Indian society. Berriedale Keith³⁷ states that the real development of the art of writing took place in 500 B.C. According to Burnell,³⁸ the art of writing was originated fifty years prior to the reign of Emperor Asoka. Diringler in his researches state that some other scholars³⁹ until recent times held extreme views that the art of writing originated in India in 1st century B.C. On most occasions, their decisions were based neither on correct information nor on adequate factors. The mere fact that one cannot

unearth is sufficient evidence regarding the particular phenomenon. The information contained in the works of Buddhist literature has been greatly instrumental in archaeological research carried out in the recent past by using modern scientific methodology leaving likelihood of changing the opinions held so far. However, it is acknowledged that the art of writing grew during the 4th century B.C. the pre-Asoka era. Rhys Davids and Oldenburg⁴⁰ held the view that at the age when the *Vinaya Pitaka* was arranged in its present form, included some chapters, which could be used in proving the fact that the art of writing, was definitely in use at the time. Diringer is of the view that the art of writing was widespread between both male and female including the children and the adults at least in 5th or 6th century B.C. However, this view has not been accepted by some scholars. Therefore, much deeper study must be made on this issue.

In *Silaniddesa* of *Cullavaggapali* of *Diganikaya* belonging to *Vinaya Pitaka* refers to the first writing available among the Buddhist sects. There contains a list of acts which should not be committed by a Buddhist monk and among them a game named *Akkharika*. This was a game prevalent among the small children, of drawing letters on the back of a person engaged in a game or staying outdoors and reading them. The word, *akkhara* has been used to mean letters in *Millindapangha*, which was composed at a later date. Accordingly, it is apparent that both children and adults had knowledge of an alphabet. However, one could argue that this implies an alphabet but not an art of writing. The existence of an alphabet associates with the possibility of using it. According to Rhys Davids it is the Buddhist texts that mentioned first about the art of writing. The facts quoted here endorse the existence of art of writing before fifth century B. C.

Vinaya Pitaka refers to three words connected with writing namely, writing (*lekha*), sealing (*muddha*) and counting (*ganana*). They have been acknowledged as the high skills of arts (*ukkatthan sippan*).⁴³ Accordingly, *lekha*, the use of records and *muddha*, the sealing both connected with the art of writing. It can be inferred that the sealing was not used in ordinary writing but in royal and administrative activities. The *ganana* was used in the activities connected with the urban economy such as trade, commerce, scales, measurements and finance. The people in all strata, lower, middle and upper have used the writing. This makes it clear that the art of writing was shown as a noble craft (*ukkatthan sippan*) well practiced by everybody. The Buddhist philosophy had provided not only wide opportunity but also incentive for learning the art of writing. This establishes the fact that the disciplinary law in *Vinaya* had instructed monks to abstain from all arts and crafts except learning the art of writing (*athapaththi lekhan pariyapunani*)⁴⁴.

In *Parajikapali* of *Vinaya Pitaka*, refers that consequences of committing suicide should not be written about (*lekhaya santavannoti*). The commentary elaborates *lekhaya samavannothi* as any writing is made to imply that anyone who commits murder will have wealth, fame or will to go to heaven, such a writer will have to undergo agony by each and every letter. What is mentioned here is about the art of writing. Accordingly, it is established that the clergy of various sects such as Brahmins, Jains and Paribrajakas made such writings available among their followers, and the common people had an adequate knowledge about the characters so as to understand them.

There is another example in *Vinaya Pitaka* on writing. “Once upon a time, there lived a man who had committed theft and escaped and became ordained among the bikkhus. The people who see him exclaimed, “This is that thief who wrote (*likhito*). Now he should be killed.”⁴⁶ Based on this event, the Buddha made a new law, i.e. “A thief wrote (*likhito*) should not be ordained.” The word, *likhita* had mentioned thrice here should mean writing. This news is about a royal order recorded and the common people were able to read. This fact is further supports the view that the art of writing had spread in the society. Oldenburg and Rhys Davids⁴⁷ who examined these lines say that the art of writing had certainly spread at the time when the *Vinaya Pitaka* was composed in its present form.

As there are contradictory views among the scholars as regards the words such as *likhita* and *lekha*. A study on the Pali lexicon (*Niganduva*) is required in this regard. According to Buhler, the words such as scribing or cutting are used in the earliest Pali literature in connection with the art of writing.⁴⁸ *likhita* and *lekha* means the scribing or an engraving on the outer surface of a hard substance. This marks the origin of the primary stage of writing in India. Accordingly, it had paid more attention to the writings of the Buddhist sects than to the Jain and Brahmin sources. In discussing the use of characters in the works of Pali sects and Jataka stories⁴⁹ two roots of verbs *likhi* and *jinda* have been used. By the expression *lekhaya samavannoti* referred previously here marks the beginning of writings or engravings in North India, but it remains select on what material it was done or what sort of tools were used. Buhler⁵⁰ says that bamboo strips found abundant along the Ganagaes Valley or the wooden boards could have been used for this. Rhys Davids⁵¹ is of the view that *lekhan cindati* means the making of writing by scratching or engraving, as was done on *puskola* (blank leaf of the talipot tree prepared for being written or engraved upon) with *panhida* (a sort of a feather shaped pen, a stylus). This supports the view that the writing was considered as an art, which was quite developed, broad-based and frequently used. This opinion challenges the views of other scholars including Rhys Davids⁵² who later said that suitable raw materials for writing were rare in India. There also existed a difficulty in preserving the raw materials like leaves (leaves of *myristica horsfieldia* or *horsfieldia odorata*), barks of trees and skins for a very long period in the climatic conditions prevailed in Northern India. Therefore, the hypothesis is that the writing on palm leaf was developed at least in a small scale with a view to maintaining temporary records. Horner⁵³ in her translation of *Suththavhanga* interprets *lekhan cindathi* as cutting a manuscripts *lekana* (writing). Though this interpretation goes well with Buhler’s opinion, what takes place on a palm leaf is similar to an act of engraving. Therefore, it is not contradictory with that of Davids’ view.

According to the first meaning of the verb root *likhi* in Pali language, underpins the above view to a certain extent. The original verb root *likhi* gives the meaning such as cutting, scratching or engraving whereas the same meanings are implied in Rig-veda. Phonetically the word *likhi* in Vedic literature has some similarity to *likhi*.⁵⁴ According to the Buddhist writings the root of the verb has four forms in its primary or earliest form. Thus, the word has derived from the root referred to above, or *likhapeyan*,⁵⁵ the general form, *lekha*.⁵⁶ The verbal form derived from the root is *likhapetva*⁵⁷ and the dative form *likhapeyan* with the verbal noun *likhitum*.⁵⁸ These words

have been used on three occasions in the sense of cutting or engraving raw materials like wood or metal. The story of one of the nobleman of Rajagaha Nuwara refers to cutting of a sandalwood log. He thought if he was to make a bowl (*likhapeyan*) from this sandalwood log, it could be offered as an alms bowl and the pieces thus scraped off (*lekhan*) could be used for his consumption. Keeping this view in his mind, he had a bowl made from the sandal log (*likhapetva*).⁵⁹ *Majjima Nikaya*⁶⁰ mentions about the carvings of images from wood (*roopani*). The word, *likithun* has been used in *Cullavagga Pali*⁶¹ for making or designing metallic articles. If alms cannot be placed in a tin or led bowl, the Buddha granted permission to thin it by carving or scrapping it off. In *Samantapasadika*⁶² too, the word *likithun* has been used to express the meaning carving off or thinning. News of sculpture in both wood and metal on the same occasion appears in *Teri Gatha*, “The king has sent him the Buddha’s character engraved on board and the story of his birth engraved on a gold plate.⁶³ As mentioned in *Mahavagga Pali*, where embodies its earliest meaning *likhitha* also equals a compound verb of the past, *ullikhathi*. It is said that mere marking of signs on a piece of cloth does not make it a *katina cheevara*, a cloth offered to a bikkhu at the close of a retreat (*ullikhitha mattena*).⁶⁴ The venerable Buddaggha Thera interprets the word *ullikhitha* as a scratching done by one’s fingernails to indicate the length and the breadth of a robe.⁶⁵ The (*Mahayana*) *Ashvalayana sutra* written at a later date gives the same meaning scratching. But it is more logical to consider that it was the placing of *kap bindu* on a robe, here means placing a betel leaf under the corners of the robe where the knot is found and press the robe with fingernails or with the terminal of a small cylindrical metal. Then the betel stain appears as dots on the robe. This stamping is considered as an act of making an ordinary robe a valid *katina* or considered as a stamping made on a robe which can be used only by a bikkhu of higher ordination. This too is equal to writing. Accordingly, *ullikhitha* can also mean the writing of letters. However, the meanings such as cutting, scratching and scribbling can be derived from the root *likhi* rather than writing. The primary meanings of these words also used to imply writing. The reason for this was that the engraving was done on materials such as gold foils, bamboo strips, wooden boards, birch barks, leaves and palm leaves. The meaning certainly differs according to the contexts in which these words are used and also in keeping with the other related vocabulary.

Further factors in support of this view are found in several places in the Buddhist literature to prove that the writing had spread at the time of the Buddha. *Sutra Pitaka* makes reference to the youths whose occupations were clerks or accountants.⁶⁶ In another story in the *Sutra Pitaka*,⁶⁷ two unfamiliar friends, Isidatta and Chitta, though they had not seen each other, became friends through correspondence. Chitta while listening to the Buddha sent letters to Isidatta admiring the merits of his inspiring sermons. The nobleman, Anapindika too had a friend who came to be known through correspondence.⁶⁸ It is also mentioned, as in the recent past, the letters were sent through the animals.⁶⁹ There was a clerk appointed to receive and record invitations of the laity who offered alms to bikkhus residing in Jethavanarama.⁷⁰ There is another instance in a Jataka Story where a bard who composed and wrote poems on palm leaves. A prince of a nobleman and a son of a maid who were born on the same day, carry books of the prince simultaneously to learn to write. Once the prince became the nobleman, he appointed the youth to the post of his private

secretary. He wrote a letter to a merchant friend of his master by intimating his qualifications and sent it after placing his master's private stamp too.⁷² As happens at present, it is recorded how the cases were settled on the basis of prior judgments. "Having read a book of judgments he said, you must settle cases by referring to the book."⁷³ In sending letters, gold plaques were used by the royal members. The king Bimbisara wrote the virtues of the Buddha on a gold leaf and sent it to king Pukkusathi.⁷⁴ It is probable that the great colleges like Taxila may have supported in favour of the development of script.

The Mahayana Buddhists believe that among the 64 different varieties of characters produced by Prince Siddhartha at the demonstration of his learning, Brahmi was one of them.⁷⁶ The Theravada school of Buddhism is of the view that Prince Siddhartha had his lessons under the tutelage of the Brahmin named Sarvamithra and that influence would have reflected at his demonstration. The *Buddhacarita* written in the 1st century B.C. describes that Prince Siddhartha learnt writing in a school (*lipishala*) and used a red sandalwood slate and a gold instrument like a pencil.⁷⁷ The scene of Prince Siddhartha acquiring his knowledge and skills the *lipishala* has been reproduced on a painting in Ajantha.⁷⁸ During the early Buddhist era, there was an officer appointed to report and preserve the incidents of fortunes, misfortunes, disasters and happy events. These records were called *neeloyicha*.⁷⁹ *Bikkhu Pacittiya*⁸⁰ and *Bikkhuni Pacittiya*⁸¹ refers to writing (*lekha*) and the writer (*lekakha*), and the *Jathakapali* refers to official and private letters. The *Mahavaggapali* refers to certain written royal orders, family matters, ethics and political fables made on gold foils, and also to the promissory notes (*inapann*) and books.⁸² The details thereof suggest that there were writings (*lekha*), mathematical calculations, scales, measurements, wages, profits, losses, interests and monetary transactions (*ganana*) in practice in the colleges. The inscription of Karavela, which is probably written at a later date, refers to writing, arithmetic and accounting (*rupa*) as subjects that were taught from the childhood. These subjects are similar to the subjects referred to in the *Mahavagga*. Buhler is of the view⁸³ that those subjects were taught in local schools even until the modern age. This could be considered as one of the factors that support the existence of the art of writing from the ancient past. The *Vinaya Pitaka* except the *Parivarapali* is believed to have been compiled at least during the pre-Asokan period.⁸⁴ The verses and commentary both introduce the words, *dhamma* and *atta* in various parts of *Tripitaka*. Accordingly, it can be inferred that the Jataka and the commentary⁸⁵ belonged to a closer period. Therefore, the facts recorded in these works about writing cannot be ignored at all.

There has been complete freedom for the propagation of the tenets of Buddhism unlike in Brahmin religion where the reading, practicing and spreading of the Vedic works were prohibited and at a certain stage even capital punishment was imposed. The wise joined, observed and thereby understood the doctrine by themselves.⁸⁶ The language of the Buddhist texts was Magadhi and there was no obstacle as such for one to learn, preach or write it in one's own language. It is said that there are 84,000 volumes in *Tripitaka* containing approximately three million syllables. If twenty four hours were to be spent to skim over the *Tripitaka*, it would take 2 1/2 years to scan it over.⁸⁷ It is difficult to imagine that such a whole gamut of detail was merely contained

in memory. It can be inferred that as the oral method was the best way of putting across some message directly to one's mind so as to grasp its meaning deeply. Much attention therefore could not have been paid to the alternative methods like writing. As for the factors such as lack of books, the difficulties involved in reading them, high regard for sermons, preference for listening and the ingrained attitudes of the contemporary society towards traditional, learning, the monks were in favour of deviating from their long practiced method. This does not mean that medium of writing totally ignored and it was subdued due to diverse reasons. Accordingly, by the 5th or 6th century B.C., the art of writing was widely spread in the Indian society.⁸⁸

There exist several archaeological evidence consistent with the information contained in the works of Theravada and Mahayana regarding the use of writing at the time of the Buddha.⁸⁹ Buhler agrees that the alphabet used in Buddhist writings was the Brahmi script. "The Brahmi script had a long history even before the Emperor Asoka who inscribed his edicts in various regions in his empire. Further, in the 3rd century B.C. it is proved by inscriptions that this was the sole alphabet used by the people of India. The Brahmi was in a more developed stage before the emergence of Kharoshti alphabet. Therefore, it can be inferred that some verses in *Tripitaka* were written in Brahmi script as it proves beyond doubt that the verses mentioned in Jataka stories and in *vinaya pitaka* were written in Brahmi.⁹⁰ This opinion may generate doubt in some however, the facts found in Jain, Brahmin, and Buddhist works, by 6th century B.C. carries evidence that the art of writing had well spread in contemporary India, perhaps not in large-scale in literary activities.

The art of writing was widely spread by the 3rd century B.C. and played an important role in the daily life of the Buddhist monks. The *Vinaya Pitaka* laid down the rules and regulations related to the life of monks, the common society and the properties and assets belonging to the people. Such rules dealt with from the tiniest object to the most important movable article used in a household and also the other articles that are not permitted to be used by the monks. Another important factor to be examined is why there had not been any kind of reference to the activities related to manuscript making and the allied articles that could be used in the process. In the presence of ample evidence on the existence of writing, instruments and raw materials, this quietness is not at all acceptable. Similarly, it is difficult to presume that the monks who learnt *Thripitaka* by-heart, did so only by way of listening. The Buddhism being such a deep philosophical religion with a massive volume of writings like *Thripitaka* with texts and commentaries could not have been maintained merely through memory. As an individual it would not have been easy for Ven. Ananda Thera, the Treasurer of the Dhamma, to do so. Therefore, we are compelled to presume that he was assigned this post as he was acted as the trustee of the library where the manuscripts were stored. According to Rhys Davids, it is clear that Indians who knew writing used it for social activities and did not use it for the recording of religious literature due to two main reasons. Firstly, it was due to their reluctance of giving up the traditional oral recital and memorization. Secondly, the lack of knowledge about the raw materials and the instruments that could be used for the purpose.⁹¹ First assumption could be possibly correct in relation to the Brahmin society. It was just because the very strict laws in force as against even the revelation of religion through any medium

of communication. However, when compared with Buddhism, the writing was encouraged and not debarred in propagation of religion.

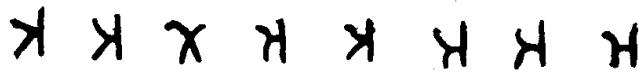
The art of writing was regarded as a noble craft. The Theravada and Mahayana Buddhist texts and the Jatakas in number of occasions refer to writing materials and instruments endorsing that the Buddhist society at the times not only knew the art of writing but also used it. The inscriptions Emperor Asoka provide us ample evidence to prove that the characters and the language therein were well developed and the art of writing had spread as a formal medium of communication. This was not a sudden growth but was a result of an evolution that had taken over centuries. Therefore, it can be inferred that what existed in 6th century B.C. was a well developed art of writing. Buhler, who considers the Karoshti is that of the clerks and the Brahmi alphabet is of the learned people.⁹² For the purpose of recording the doctrine of the *tripitaka* the Brahmi and the Prakrit script were quite sufficient.

The Brahmins were reluctant to use the art of writing for their Vedic literature even by the 6th century B.C., the holy textbooks were carried forward orally. However, it is reasonable to presume that the Buddhist monks made use of writing in propagation of Buddhism. The positive response towards writing that extended by the Buddhist kings, inspired the Brahmins to use writing at the beginning of the Christian era. In order to protect their positions in the society, they started writing secular prose using the newly developed Brahmi script. It appears that some of the earliest Brahmi inscriptions inscribed on pillars including the inscription of Helio Dorus at Basenagar were written in Prakrit. As Edward Thomas pointed out, there were various difficulties involved in the use of classical Sanskrit language, which was the medium of Sanskrit prose. Such difficulties however, overcame when Brahmi inscriptions like Girinagar were written. In the meantime during the 6th century B.C., Buddha preached his doctrine in Pali language. This cleared the obstacles to propagate Buddhism in any language and the Bikkhus too preferred to shift over to the textual language. The Pali language thus rapidly gained its popularity and expansion, which was an impetus to spread the art of writing simultaneously. Consequently, a competition between Sanskrit, the language of the Brahmins and Pali or Magadhi, the language of the Buddhists gained momentum. This new competition could have greatly influenced the growth of the art of writing and the use of religious texts became popular in the contemporary society.

As pointed out previously in this paper, the scholars are of multiple opinion on the period of origin of the art of writing in India. Among them, Ananda Coomaraswamy⁹³ is of the view that the art of writing spread in the 8th century B. C. or perhaps even before. Musan Orsal and Wilman de Grabovska⁹⁴ hold the view that it was about the 8th century B.C., Rhys Davids⁹⁵ and Diringer⁹⁶ says that it was between the 6th and 7th centuries B.C. while Buhler⁹⁷ believes that according to the palaeographic and the scientific evidence the Brahmi characters would have originated in or around the 6th century B.C. The upper limit of the period suggested by all of whom referred to above was the 8th century B.C., whereas the lower limit was the 6th century B.C. Accordingly, all of them are in agreement with the fact that the origin and the expansion of the Brahmi characters took place during these two centuries. Therefore, one could reach the conclusion that the art of

writing of Jain, Brahmin and especially the Buddhist religious scriptures developed over the 6th century B.C. and the conclusions of the scholars match with the details in the respective religious scriptures.

It is necessary to make a careful analysis of the archaeological evidence in association with paleography in India and Sri Lanka with a view to arriving at a definite conclusion as regards the origin of the art of writing. The lithic records related to the origin of the Brahmi alphabet agree with the literary evidence for the period between 5th and 6th centuries B.C. The variety in the alphabet shows that the Asoka characters in particular were in existence prior to the 3rd century B.C., during which they had widely spread. Except the letters, **u, jha, o, na, tha, na, tha** and **na** in Brahmi alphabet, the other letters took several unequal forms. It can be seen that half of them has a local and the other half of foreign origin. The eight different forms of the letter 'a' are of especial importance. They are as follows:



The obvious characteristic of them is that while one part is formed angular and the other part has been circular. These characteristics are common for the other letters, namely 'gha', 'da', 'da', and 'la'. Here, the type of letters numbering 1, 2 and 3 are found in Asoka inscriptions at Girinar, Siddhapur and Jaugadha, and they are angular in shape. The letters numbering 4 and 5 are in a process of evolution from angular to circular shape whereas the letters numbering 6 and 7 are of a circular shape. These letters are found at the places referred to above and also in the inscriptions found to the north of Vindya mountain range and the river Narmada. The angular letters such as 'a' and 'a' are considered as of the southern Indian origin and the oldest.

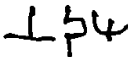
There are adequate inscriptional evidence about the spreading of the angular-shaped letters found on inscriptions of Kollhapur and Battiprolu relic caskets and also on the oldest Andra inscriptions at Nanagat. The angular shaped letters blended with circular are found in the caves located north of Phabhosa, Mathura, Bharuth and Sanchi and also on the coins of Agathocles and in the cave inscriptions at Nagarjunikonda.⁹⁸ Buhler clearly identified these letters with the modern form among the letters with the mixed characteristics developed in a latter period. Accordingly, the letters (2) and belong (3) to the oldest category. The letters (4) are found in the cave inscriptions



of the King Dasharatha at Nagarjunikonda and also in the Hathigumpā epigraph of Karavela and in the old Andra inscriptions as well. While they are also found in the inscriptions on the cave no. 1 at Nasik and also in the oldest inscriptions at Nanagat and Mathura, which belong to the period between 170 and 150 B.C. The letters are found in Kushana inscriptions and also in Andra and Abira inscriptions at Nasik and belong to the 1st and 2nd centuries B.C.

Buhler who made an indepth study of the special characteristics of the Brahmi letters on the ancient lithic records spread in many regions of India concluded that Brahmi letters had their

origin long before the Asokan era (3rd century B.C.) and later they have been subject to a process of evolution and expansion. The inscriptions belonging to the 3rd century B.C. contain Brahmi letters with mature characteristics. The paleographers who paid further attention to the Buhler's opinion too were of the view that his opinion could not be ruled out. Especially, the ethnic diversity of the native forms of the Brahmi letters and also the fact that there are many more letters of artistic than those of angular shape which supports the Buhler's view. It can therefore be acknowledged that the Brahmi alphabet originated long before the era of Asoka.

Among the evidence that have been unearthed after the archaeological excavations, many archaeologists including Cunningham⁹⁹ have agreed that the Persian coin with Brahmi letters was one that belonged to the pre-Asoka era. Several scholars opposing this views say that the coin belongs to a later age. There is hardly any doubt that coin belonged to the 4th century B.C. The clause on this Persian coin in Brahmi letters runs from the right to the left. The form of these letters retains primary characteristics. Among the earliest Asoka inscriptions and the earliest Brahmi inscriptions in Sri Lanka, there are clauses that running from the right to the left. Accordingly, there is a school of thought that the Brahmi alphabet in its earliest stage written from the right to the left. The words  *nadaya* (*nandaya-nanda's*) are inscribed on the Persian coin and Buhler¹⁰⁰ too, agrees that it would have made prior to the Asoka era. The *Patna Seal*¹⁰¹ made prior to the Mauryan era is similar to this. While *agapalasa* is inscribed there, the syllabic "a" therein resembles the earliest Brahmi characters and is yet an important factor. According to the standard printed coins used in ancient India, and among those of which were found in the place presently known as Shah-Deri of Takshila province of Punjab, there were the coins with Brahmi and Kharosthi clauses and a mixture of both. These coins too have been identified as those made prior to 3rd century B.C. Therefore, Cunningham¹⁰² concluded that these coins belonged to the 14th century B.C. Besides, it is clear that the use of Kharosthi together with Brahmi became popular in the Punjab province at a very early stage. The Persian Sygloi coins with Brahmi – Kharosthi letters substantiate this view further. The facts that Rapson¹⁰³ has discovered reveal both alphabets were concurrently used. These Sygloi coins were the currency used by the Armenians during their rule in the North-West of India, or they had been used at least prior to the 331 B.C. According to Tylor, "Kharosthi had its origin from the post-Aramaic alphabet which was in existence after the conquest of Punjab by Darius in 500 B.C." This is acceptable. The scholars, including A. Weber, E. Thomas and A. Cunningham¹⁰⁴ are of the view that Brahmi had developed by then. Thus, through an analysis of the oldest Indian numismatic and related palaeographic factors, it could be presumed that the Indian alphabet had been well established by the 4th century B.C.

The oldest lithic records with the primary characters of Brahmi alphabet could be closely examined and compared with several other contemporary inscriptions. The primary letters, "dra", "vi", and "di" of the Battiprolu relic casket resemble the northern Indian types of the Asoka alphabet. The letters, "cha", "chha", and "sha" are older than the Asoka letters and those on the Persian coin. Therefore, the Dravida alphabet could have been originated from a principal branch of Brahmi letters after the 4th century B.C. and also prior to the minting of the Iranian coin. The

Brahmi alphabet gave birth to number of regional alphabets of different provinces of India and also for foreign alphabets like those of Burma (Myanmar), Siam (Thailand), Cambodia, Indonesia and Sri Lanka. Among the indigenous alphabets, the languages, Nāgarī, Dravida, Malayālam, Vaṅga, Hindi and Urdu originated from the Brahmi alphabet. Therefore, Brahmi can be considered the oldest alphabet.

The inscription found at Jethavanārāma in Sahēth Mahēth,¹⁰⁵ refers to Savath Nuwara written in the oldest Brhami letters. The primary Brami letters can also be seen in the inscription¹⁰⁶ engraved on the relic casket at Piprāva stupa in the city of Kapilawasthu. The letters in these inscriptions have some similarity to those of the earliest Asoka inscriptions they are believed to have been written prior to the 3rd century B.C.

The names of the chief disciples of the Buddha, Arhats Sariputta and Moggllana, had been inscribed on the lid of a relic casket which is believed to have been taken away from India to the Victoria-Albert Museum in London, subsequently brought back and deposited in a Sanchi Stupa. It is also said that the two names had been drawn inside the casket with ink. This should be the oldest example available to compare the letters inscribed on a stone and the letters drawn in ink on a metal surface. The letter “s” in the words drawn in ink indicates an spherical evolution.¹⁰⁷ Fleet and Louder, who were engaged in a linguistic analysis of the words on this relic casket inscription found by Cunningham, believed that it belonged to the period prior to the 3rd century B.C. John Marshall,¹⁰⁸ who made a further study on this endorses the view of Cunningham. The clay, granite, rock and the crystal relic caskets described by Cunningham in his work, *Bhilsa Topes* are said to have been found in the South Kensington Museum. The epigraphists¹⁰⁹ believe that there are small stone slabs inscribed with the names of the followers of the Buddha inside these caskets and they are similar to those found in the Asoka inscriptions at Girinār and those early-Brahmi cave inscriptions in Sri Lanka. They also believe that the mature stylish letters found among them indicate that they were written prior to the 3rd century B.C. While paying attention to these inscriptions, Cunningham¹¹⁰ says that the chronology of the stupa can only be surmised, but cannot be exactly decided upon. According to the style of the letters in the two inscriptions and those on the short terrace on which the dome of the stupa rests, the stupa would have been constructed at least during the early days of the reign of the Emperor Asoka. If that is so, the inscriptions on the relic caskets deposited in the stupa should belong to the period in which the stupa was constructed or prior to that age.

The archaeological excavations have proved that the metal inscription found at Sōgōrā, and the stone inscription found at Mahāstān, belong to the pre-Asoka era. Here exists an opinion that the letters of the Sōgōrā inscription symbolize the Emperor Chāndragupta Maurya. The stone inscription discovered at Burly in Rajastān mentions about an offer made at the 80th year 111 of the passing away of Mahaveera of the Jains. Therefore the Burly inscription belongs to the period prior to the 3rd century B.C. The style of the Brahmi letters inscribed therein indicates that they have been written between the 5th and the 4th centuries B. C. The scholars are in agreement that the Brahmi inscription of the Devil statue at Pārkkam and the two inscriptions at Pātna belonged

to the pre-Asoka era. The reference to king Ajāsatta in the inscription at Pārkkam indicates that it is considerably old. The facts in ancient Jain, Brahmi and Buddhist religious literature and also the archeological evidence including epigraphs and also the characters in minor records found in Takshila province prove that the art of writing using Brahmi alphabet was in practice before the Asoka age (the 3rd century BC).

Ample evidence from Sri Lanka too, can be cited in support of this argument. Dani¹¹² and Buhler¹¹³ are also of the view that the Brahmi script was used in Sri Lanka by the Indian colonists who arrived before the Asoka era. After a prolonged study on this, many Sri Lankan scholars including C. E. Godakumbura, P. E. E. Fernando, Ananda Kulasuriya and Nandasena Mudiyanse¹¹⁴ have authoritatively established that the Brahmi characters were introduced to the island by the Indians who arrived in Sri Lanka at least in the 6th century B.C. This was before the arrival of the propagators of Buddhism in Sri Lanka, who practiced a series of Brahmi characters which had evolved from some sort of Indian genesis. The recent archaeological researches have uncovered evidence to establish this conclusion further. S. U. Deraniyagala¹¹⁵ believes that the Brahmi characters had been in use in Sri Lanka since the period between 600 and 500 B.C. If this view is acceptable, the Brahmi alphabet should have been expanded in India for a considerable period before it migrated to Sri Lanka. This view is further substantiated by the ancient religious literature, especially the facts recorded in the Tripitaka or the Buddhist Canon.

This argument is associated with several problems which require satisfactory answers viz. what is the origin of the Brahmi characters, when, how and where was it? The eastern and western scholars have expressed diverse opinions in this issue taking the researcher into disarray in grasping what is correct. However, the archaeological researches conducted more recently have uncovered factors that help to establish some of these views and negate some other conclusions. The following facts may be examined briefly. Among the suggestions on the origin or the root of the Brahmi letters, A. Weber's¹¹⁶ thinks that it had its genesis from the Phoenician characters.¹¹⁷ says that they were originated from the cuneiform characters in the old south Semitic alphabet of Assyria. I. Taylor's¹¹⁸ view is that they originated from a south Arabic alphabet, which is extinct. J. Halevy's¹¹⁹ view is that they evolved from a fusion of Aramaic, Greek and Kharōsthi letters which existed in the latter quarter of the 4th century B. C. Buhler¹²⁰ thinks that Brāhmi was born in about 800 B.C. from the oldest north Semitic alphabet or in other words from the Phoenician alphabet. The scholars, James Princep, Max Muller, Pavil Senāt, Rauld Rāvet and Nobel Albeva hold the view that Brahmi originated from a Greek root. At the same time, there is another group of scholars consider that the Brahmi characters are an indigenous product of the Indians. D. R. Bandārkar¹²¹ says that it is a self-creation of the Indians. A. H. Dani¹²² too, contributes to this view. Cunningham's¹²³ view was that Brahmi originated from the native pictographs of Bharat. Gad, Sydney, Smith, Hunter and Landon believed that Brahmi had a native origin and it came into being in the 3rd century B.C. Landon¹²⁴ and Hunter¹²⁵ share the view that Brahmi evolved from the Indus-valley pictographs. Stuart Piggot¹²⁶ says that Brahmi evolved from the trademarks. This is an opinion, which indirectly supports the view that Brahmi was of Indian genesis. Landon, Prankarn and Sadathsu Kumar said that the Indus-valley characters and the Brahmi characters

had a strong parity. R. Sharma Sastri believed that Brahmi characters evolved in association with various god statues and symbols. Edward Thomas and T. N. Subramaniam stated that Brahmi originated from a Tamil root. This too, favours the opinion on the native genesis of Brahmi.

The majority of paleographers hold the opinion that the Brahmi alphabet is of native genesis in the very Bharat. Of them, many believe that Bharat characters were formed from those of the Indus-valley pictographs. Many scholars who carried out the researches on the Indus-valley characters were of the view that they should either be the pictographic or the logographic characters and the language should be Dravidian. It is important to note that among them the researchers including Fairservis,¹²⁷ Knorozov,¹²⁸ Rao,¹²⁹ Parpola,¹³⁰ and Mahadevan¹³¹ subscribed this view. The conclusion of Paranavitane¹³² was that Brahmi characters were phonetic and the language was Sanskrit. Accordingly, some scholars see some relationship between Brahmi and Indus-valley characters. This relationship could be shown in several aspects. This parity manifests in the following three ways.

1. According to the recent readings, there is a similarity between the characters identified in the Indus-valley and the Brahmi characters.

Brahmi				
Indus-valley				
Transliteration	ma	ba	ya	yam

2. Though cannot be definitely identified, there is some parity of the symbols, which have similar characteristics with those in the shape of Brahmi characters.

Brahmi										
Indus-valley										
Transliteration	dha,	tha,	e,	da,	jha,	ya,	ta,	sa,	ha,	bha

3. There is some similarity in the way that the lines are used to express consonant sounds of the Brahmi characters and in Indus-valley characters in this regard.

Brahmi characters							
Indus-valley							
Transliteration	ma,	me	sa	so	su	ha	hi

Accordingly, this threefold connection between the Brahmi and Indus-valley characters indicates that there existed a strong relationship among them. At the same time some characters in both have no distinction in shape. The long-term evolution has caused these changes. If not, it was the regional expansion. This becomes clear when another alphabet evolved from Brahmi

characters and expanded for a long time or gained regional characteristics.

The archeologists¹³³ who made indepth studies into the Megalithic culture of the protohistoric age have concluded that the symbols on the clay vessels and the stone lids belonging to the Megalithic culture are similar to those on the Harappān and Post-Harappān seals and also to those symbols on the earliest sealed coins. It also resembles some similarity to those Non-Brahmi symbols found on the ancient inscriptions in Sri Lanka as well.

The similar characteristics can be found in symbols on the megalithic pieces of pottery discovered at the archaeological sites¹³⁴ where there were colonies and cemeteries in the Indian sub-continent.

The vessels of Harappan and post-Harappan *Calcolithic* periods belonged to the pre-megalithic culture are found at cultural sites.¹³⁵ There are large number of clay pots belonging to megalithic culture¹³⁶ also found in India. The researches have revealed that those symbols have been marked on them either before or after they baked. According to B. B. Lal,¹³⁷ there are 61 different symbols on these vessels, which could be separately identified, and 47 of those 61 symbols are similar to those in megalithic clay vessels and Post-Harappan seals. Of the remaining 14, though 06 belong to the megalithic clay pots and 08 belong to the Harappan and Post-Harappan seals. However, 80% of the megalithic symbols are similar to those symbols that belong to the Harappan copper culture. Therefore, Lal presumes that 90% of the similar symbols of those two cultures should have implied the same meaning. Likewise, 50% of the symbols found on the Indus-valley seals and the megalithic clay vessels are similar to the Brahmi characters on the early inscriptions and to the Non-Brahmi characters as well. Therefore, all these seem to have originated from a single root and they seem to have been of the same alphabetical connection, a linguistic value and an orthographic similarity. The scholars who refused to subscribe the view that the Brahmi characters originated from the Indus-valley characters cited the time-lag between the period in which the Brahmi characters spread and the period that the Indus-valley characters were in use as the fundamental reason for their objection. This question too has been to a certain extent here.

The researches carried out at archeological sites,¹³⁸ of megalithic colonies and cemeteries belong to the protohistoric period in Sri Lanka, the research on early Brahmi cave inscriptions and also the numismatic researches indicate that those symbols and most of the Brahmi characters bear resemblance to those Indus-valley characters. The archeologists¹³⁹ who were engaged in research on this are of the view that there is a mutual connection and parity among these symbols and the characters. Paranavitana introduced a method to read the Indus-valley characters through the use of Non-Brahmi symbols found in Brahmi inscriptions. This method has not been totally accepted, however, it has now become necessary to consider it as quite acceptable method. Accordingly, the symbolic and the orthographic characters mentioned above match well with each other in cases of both India and Sri Lanka. The fact that there is a mutual relationship among the Indus-valley characters, the symbols on megalithic vessels, the symbols on the old coins¹⁴⁰ and the Brahmi

inscriptions, carries a good reason to support the view that the Brahmi characters had their genesis in the Indus-valley characters. Lal¹⁴¹ too, accepts the view that some characteristics of the Indus-valley symbols have remained through the Copper Age and the early Iron Age, up to the proto historic period.

Another special characteristic is the direction in which the Brahmi letters and the Indus-valley letters have been written. The Brahmi letters have been written from left to right, whereas the Indus-valley letters have been written from right to left. Some scholars believed that there could not have been any relation between those two types of characters. The factors that negate this opinion have already been disclosed. Cunningham,¹⁴² who discovered the Iranian coin, and also Buhler¹⁴³ and Allan¹⁴⁴ accepted that the coin was printed before the Asoka Brahmi characters, i.e. at least in the 4th century B.C. The Brahmi sentence on this coin runs from right to left. Taking this into consideration, Buhler said that the earliest Brahmi characters were written as Karōshti characters, and perhaps they could have been written in both ways, from right to left and left to right. At a later stage Brahmi took the style of writing as from left to right. Some lithic records of Asoka, written from right to the left are less in number. The letter “o” in Jaugada and Dauli inscriptions, and the letter “dha” in Jaugada and Delhi Sivalic inscriptions have been written in a way opening from right to left. The letter “a” in Pātnā seal, and the letters “dha”, “da”, “bha” in Bhattiprolu relic casket are open to the right.¹⁴⁵

The Yeragudi minor rock inscription has been written following the dual-direction. Diringer’s conclusion on this inscription is, that as Sahni pointed out, is a clear factor that indicates the dual direction method, i.e. moving from left to right and right to left was known during the Asoka era. Accordingly, there are enough evidences to prove that the earliest Brahmi characters were written from right to the left. As the Greek alphabet developed through the method of dual-direction, the traditional Brahmi alphabet too followed the same development.¹⁴⁶

The evidence relating to the direction in which earliest Brahmi characters written could also be found in the southern Indian provinces. Only five or six inscriptions of this sort were found in the Indian sub-continent, whereas over forty Pre-Brahmi inscriptions¹⁴⁷ have been found in Sri Lanka.

Among them, the opinion of Sirkar on the cave inscription, No. 07 at Duveḡala, alone is sufficient. “This record with special marks, which appears to have belonged to the 11st century B. C. indicates either the fact that prior to Asoka (273-232 B.C.), who made the inscription written from left to right, the Brahmi alphabet had been known in Sri Lanka or the fact that perhaps the earliest alphabet of south India had an impact on this. Apart from some parts of the Yeragudi minor rock inscription, which are roughly cut deep inside, the Brahmi letters do not read from right to left. This inscription enables to prove that Kharōshti as well as Brahmi was first written from right to left.”¹⁴⁸ This conclusion is more acceptable for it can be agreed that the colonists from North India had arrived in Sri Lanka through both eastern and the western routes since the 6th century B.C. Many characteristics, which are not seen in the inscriptions of Asoka can be seen in the south Indian inscriptions and in the inscriptions in Sri Lanka. Buhler accepts the view that

Brahmi was introduced by the colonists in Sri Lanka before the Asoka era. Therefore, it can be presumed that a separate Brahmi alphabet had spread both in Sri Lanka and in India prior to the Asoka era. P. E. E. Fernando who was in agreement with this view concluded “Brahmi alphabet perhaps consisted of the *Mohenjodarō* characters and with the passage of time, it migrated to South India, thereby becoming the south Indian variety of the Brhami characters. Through the relationships that had existed between the said province in India and Sri Lanka since the very old times, this alphabet could have been used in Sri Lanka.”¹⁴⁹

Apart from the Pre-Brahmi inscriptions, several more factors have uncovered from the modern archeological researches indicating that the Proto-Brahmi letters were written from right to the left, and the Brahmi alphabet had been in existence both in South India and Sri Lanka prior to the Asoka era. These factors further suggest that Brahmi had its genesis in the Indus-valley characters. There are some bronze rings found at a megalithic cemetery of Aneikottei in Jaffna penisular. Below the line of the following megalithic pictograph,(11) was made the Brahmi character line,(12) namely, Koveta.¹⁵⁰ Four of the clauses that appear on the red and crimson colour clay pot pieces, are belonging to the proto-historic age.¹⁵¹ These pieces have been found in an excavations done at the Anuradhapura Gedige. These four are namely,(13) (mahu),(14) (tisa)(15), (kana or naka), and (devayaha). Here ‘mahu’ gives the meaning the “elderly” or

(11) (12) “ ” (13) “ ” (14) “ ”
 (15) “ ” (16) “ ”

“senior”. e.g. – Malutisa = Mahalka Tissa “Tisa” means Tissa. “Devayaha” means “08 Deva or Devas”. Here if the two characters are assumed as “kana”, it is difficult to interpret it. In general meaning it can be assumed that “kana” means ‘thuduwa’ or the ‘cape’. Here it seems not quite meaningful. If this word is read as “naka” from right to left, its meaning is “naga”. “Naka” is mostly found in inscriptions when proper names or tribes are introduced. They are such as ‘Nakaputha’, ‘Parumuka naka’, and ‘Malunaka Tissa Maharaja’. Accordingly, this word appears to have been written running from right to left. These records reveal that Brahmi characters had been used together with the pictographs of the megalithic culture during the pre-historic period of Sri Lanka, and perhaps they implied the same meaning. Thus, it is clear that there is some similarity among these pictographs and Indus-valley pictographs and some Brahmi characters as well.

Especially, the clay pots discovered at the archeological excavations carried out at the Mahāpāli Alms Hall and on the premises of Gedige in Anuradhapura contain several records written in Brahmi and also several single characters. Among them are the words (17) and, (18) and the single letters (19) and(20). Deraniyagala¹⁵² was of the view that they belonged to the Proto-Brahmi age and the pieces of clay pots found bearing the marks that were not of Brahmi

(17) “ ” “ ” (18) “ ” (19) “ ” (20) “ ”

but belonged to the period, dating back to at least between 600 and 500 B.C. This chronology has been established by the Carbon 14 Chronological experiments. Some scholars say that there has been a time-lag between the genesis of the Brahmi characters and the spread of the Indus-valley characters. Thus, the problem of the interval of time gets resolved here. Further, this finding consolidates the link between the megalithic pictographs and the Indo-valley characters.

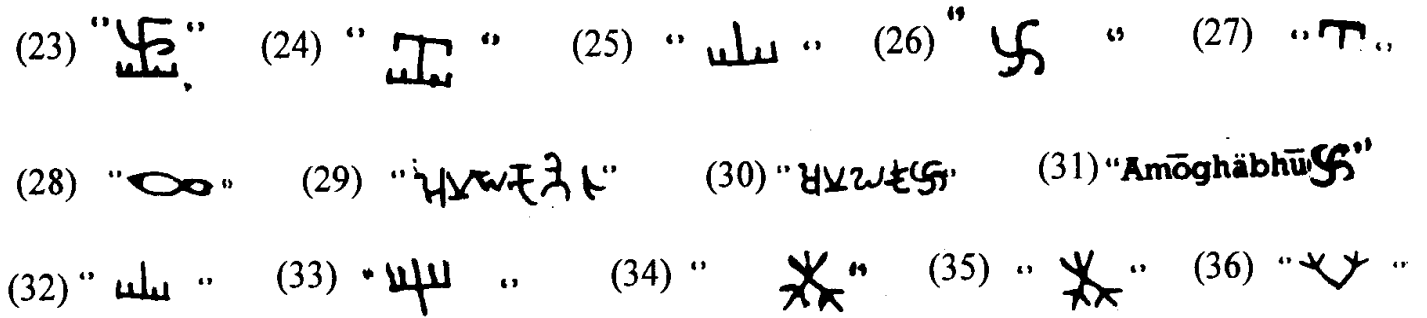
The paleographers and the archaeologists use two methodologies to read Indus-valley characters, namely the internal method and the external method. The scholars including Mahadevan, Parpola, Rao, Knorozov, Fairservis and Renpev¹⁵³ were interested in reading records in keeping with the conventional characteristics of the Indus-valley characters. B. Priyanka¹⁵⁴ too had made an attempt in this regard in the recent past. Parnavitan¹⁵⁵ read especially the Indus-valley characters using non-Brahmi symbols found on the Old-Brahmi inscriptions in Sri Lanka. Those who followed these methods agreed in common that the Indus-valley characters had been written from the right to the left. Accordingly, the earliest inscriptions found in Sri Lanka too, bear witness to the fact that the Porto-Brahmi records too were written similarly from right to the left.

As Dravidians and *Tōdarians* speak a language that belongs to the group of Indo-Aryans and the people of Indus-Valley must have used a language that belonged to the same group, namely Sanskrit or a language connected to the Sanskrit. As Cunningham and Hunter stated, the Indus-characters introduced **warna**, namely semi-sounds written from right to the left, Parnavitana¹⁵⁶ started his reading on the conviction, "The Indus-characters are alphabetic". While there is some parity between the symbols on the sealed coins in India and Sri Lanka, the Indus-Valley characters, also between the Indus-valley characters and the Non-Brahmi symbols on the oldest inscriptions in Sri Lanka, the sealed coins of both countries and the Pre-Brahmi cave inscriptions in Sri Lanka are almost contemporary.¹⁵⁷ Based on these compound symbols on the Brahmi inscriptions, Parnavitane interpreted the Indus-valley characters. The pictographic monograms.

“  ” in “Gamanitisa’s” inscription at Dambulla cave, “  ”

in “Gamanitisa’s” and his father, “Majhimarāja’s” inscription at Henannigala Vihara,(23) in “Tisa’s” inscription, the step-son of Gamini Abaya at Gallena Vihara, (24) in “Gamani Uthi’s” sister’s inscription at Mihintale, have a symbol of the same form. While the lower part of these symbols always visible, but the upper part is different. Therefore, the lower part implies the honorary name, whereas the upper part implies the proper name. Accordingly, Parnavitane¹⁵⁸ says the figure part (25) represents ‘g’ or ‘grāmini’, the upper swastika (26) represents ‘tisa’. Therefore, it is apparent that (27) in the upper part of Mihintale inscription implies ‘uthi’ while the fish symbol (28) in Henannigala inscription implies majhimarāja, or matsya rāja (king of fishes). The upper part of several inscriptions in Ruhuna area containing the name “Gamini” with other names changed. “amoghabhutisa” (29) on the coin bearing number 1 in Alan’s work¹⁵⁹ appears as “on the coin number 3. This makes it clear that the symbol (30) (31) swastika represents “tisa” = tissa. Thus Parnavitane’s conclusion was that the symbol represented ‘g’ or ‘gamani’, and

this symbol (32) was similar to the symbol, (33) of the Indus-valley characters, and this implied “grā” or “grāmini”. Similarly, the symbol in (34) the Korawakgala inscription of the major, ‘Mita’ (Mitra) of the king, Devanampiya Abaya and the symbol (35) in ‘Nättukanda’ inscription of Nadika Putha Mita are the same, and they both bear the same name. Therefore, he said that this implies either ‘Mita,’ or ‘Mitra’ and the letter, (36) among the Indus-valley characters represents



the phonetic value, ‘mita’ or ‘mitra’. According to this analysis of Paranavitane, it is established that the inscription symbols evolved from Indus-characters. It can be assumed that the Brahmi alphabet was a creation resulted in the evolution of these symbols. Though this interpretation of his is not totally accepted, it is clear that there is some parity between the symbols in Brahmin inscriptions and Brahmi characters. This confirms that by the end of the 1st century, the Indus-characters had been used in its primary form and the common people were able to understand them.

The clauses on the Indus-valley character seals, read so far, reveal that the language of there seems to be the characters of Sanskrit, and it is similar to the Prakrit in Brahmi records. The clause,¹⁶⁰ over the figure named “Purvashiva” alias “Pasupati’ wearing a crown with buffalo horns among the wild animals in the stamp No. 2420 of the Parpola and Joshi collection,¹⁶¹ is “𑀧𑀨𑀩𑀪𑀫𑀬” read as “ ha-sa-hi-ma-ma” from right to left, and when it is arranged from left to right, it reads as “ma-ma-hi-sa-ha”. “Mama-hisaha” means “mā-ma-hi-sa” in Sanskrit language. Mahis means ‘buffalo’ and “ma” means “mahā” (great). Accordingly, this implies the chief of the animals, Pa_upathi. The letter “ha” indicates the dative case singular, “ge”(of). In proto-Brahmi inscriptions, the dative case ‘sa’ or ‘ha’ as (maharajaha or gamanitisasa) was used. Accordingly, the phonetic value and the meaning of Indo-characters become similar to Brahmi-Prakit language. When the above facts put foreword by the scholars including Cunningham, Landon, Marshall, Hunter and Paranvitane are taken into consideration, it can be concluded that the fundamental characteristics of the Brahimi and Prakrit letters are found in the Indus-valley characters and also in the Sanskrit language.

Conclusion

It is evident that by the era of Asoka, Brahmi inscriptions in India were at the height of its development and improved to the level of the Brahmi alphabet and Prākṛit language. Neither an alphabet nor a language developed within a short time of its genesis. The characters should

have evolved through a long period of time. Similarly, the common people would have known Brahmi characters and the Prakrit language in order to understand each other. The people who have not received any education, the common folk, were well aware of the contemporary art of writing in the 3rd century B.C. Before the records were made, letters evolved over many centuries and undergone a long term development process. Particularly the Asoka inscriptions¹⁶² were made to communicate with common people, especially with the people of the provinces. The Brahmi alphabet thus had its genesis in the Indus-Valley characters and it evolved over a long period of time. By the 6th and 5th centuries B. C. reached its peak and spread rapidly in the 4th and 3rd centuries B. C. The conclusion made by Isaac Taylor on the expansion of the art of Brahmi writing in India and Sri Lanka in 3rd century B.C., alone is sufficient to establish the arguments produced in this paper. "The well-adorned charming alphabet in these inscriptions is par excellence in the word in its scientific beauty. The characters therein are clear, simple, great, complete, unforgettable and easy-to-read. As grammarians have presented the superb idiom with a phonetic analysis of all regular sound varieties with good clarity, they can be read without complications. Artificial alphabet prepared by modern phonologists is not so much high as this in its elegance, skill, accuracy and perfection".¹⁶³ The modern archeological findings have more firmly established these views expressed and quoted earlier in this paper.

Accordingly, it can be concluded that the Brahmi art of writing, which originated from the Indus-valley pictographs, developed to an art of writing in Bharath at the dawn of the Jain and Brahmin era, spread commonly by the 6th and 3rd centuries B.C., spread widely not only in India but also in neighbouring countries including Sri Lanka.