Palaeographical Development of the Brāhmī Script in Ceylon from 3rd Century B.C. to 7th Century A.D.[1]

EVER since the decipherment of the Brāhmī alphabet by James Princep in the earlier decades of the nineteenth century, the origin of this alphabet has been a subject of keen and protracted controversy. A variety of scripts ranging from the Phoenician to the Greek, and from the Persian to the Chinese, has been suggested by various scholars who have interested themselves in the subject.[2] The tendency in recent times has been to support Cunningham's view[3] that Brāhmī had an indigenous origin—but on different grounds. The latest theory worthy of consideration is that of Langdon who has ' definitely stated that the early Indian alphabet, known as the Brāhmī script, is derived from the ancient pictographic writing.'[4]

When, by whom or under what circumstances the Brāhmī script was introduced to Ceylon must remain a matter of uncertainty in the present state of our knowledge. The *Mahāvaṃsa* contains a number of references to the practice of writing and the use of letters in the very early period of the history of Ceylon.[5] From these statements it would appear that the practice of writing books and letters had existed even in the earliest times. But it has to be remembered that the *Mahāvaṃsa* was compiled about the 6th century A.D. It is therefore not possible to say definitely whether in these statements the Chronicle is preserving an authentic tradition or attributing to an earlier period a practice which was certainly existing when it came to be written.

It would be safe to assert that the Brāhmī alphabet was known in Ceylon in the time of King Devānaṃpiya Tissa 247-207 B.C. in whose reign Buddhism

1. These notes on the development of the Sinhalese Alphabet are based mainly on the chart showing the Palaeographical development of the Brāhmī script in Ceylon from the 3rd century B.C. to the 7th century A.D. by C. W. Nicholas, published in the *University of Ceylon Review*, Vol. VII, No. 1. I must thank Mr. Nicholas for permitting me to consult his eye-copies and notes in the preparation of this paper.

2. For a discussion of the Origin of the Brāhmī Alphabet see : J. Princep, *Essays on Indian Antiquities*, edited by E. Thomas, Vol. II, pp. 42-43 ; Isaac Taylor, *The Alphabet*, pp. 304-324 ; *Proceedings and Transactions of the Fourth Oriental Conference*, Allahabad 1926, Vol. II, pp. 625-661.

3. Alexander Cunningham, *Corpus Inscriptionum Indicarum*, Vol. I, *Inscriptions of Asoka*, p. 53.

4. Sir John Marshall, *Mohenjo-Dāro and the Indus Civilization*, Vol. II, p. 423.

5. *Mahāvaṃsa*, VII, 51 ; XXIII, 33 ; XXXIII, 40 ; XXXIII, 50-51.

is said to have been introduced to Ceylon.[6] The earliest inscription found in Ceylon which can be dated with a reasonable measure of certainty, however, is a Brāhmī inscription discovered at Mihintale, containing a reference to a king called ගමණි උති මහරජ, (Gamaṇi Uti Maharaja), of whom Dr. Paranavitāna says, " The king appearing in this inscription can be definitely identified as Uttiya 207-197 B.C."[7] He was the successor of Devānaṃpiya Tissa.

The characters used in the earliest inscriptions of Ceylon bear a marked resemblance to, and are almost in the same stage of development as, the characters used in the Brāhmī records of Asoka. But there are certain features in the Brāhmī records of Ceylon which distinguish them from the records of Asoka. The former contain two letters which do not occur in any of the records of Asoka, *viz.* '*i*' (𑀇) consisting of a vertical stroke on either side of which, at the centre are two dots and the '*ma*' (𑀫) formed of a U-tube like curve with a horizontal cross-bar terminating at the middle of the vertical arms. If, as is generally believed, the Brāhmī alphabet was introduced by the Buddhist missionaries who came over from India, it has to be explained how the Ceylon records which, as far as is ascertainable, go as far back as the time of King Uttiya, came to have forms of the '*i*' (𑀇) and the '*ma*' (𑀫) which are altogether absent in Indian records set up at the same time the Ceylon records are said to have been inscribed. The earliest occurrence of this '*i*' (𑀇) in North India is in the 2nd century A.D.[8] The '*ma*' (𑀫) has not been noticed in any record of North India of the time. Perhaps these letters may have belonged to a different school of writing, that had separated itself from the Northern School and had remained confined to the South.

A close parallel to the early Brāhmī records of Ceylon is offered by some interesting Brāhmī records discovered in South India, occurring in a series of caves found in the Pāṇḍyan Country, round about Trichinopoly, Madura and Tinnevelly.[9] These records, like those of Ceylon, are carved on the drip ledges of some ancient caves and on palaeographical grounds these inscriptions have been assigned to the 3rd century B.C.[10] In general appearance these records are so like the ancient cave records of Ceylon that one can almost mistake them to be those carved in caves at Mihintale, Vessagiriya and such other ancient sites in Ceylon. In addition to these palaeographi-

6. *Mahāvaṃsa*, XVI, 12.

7. *A.R.A.S.C.*, 1933, p. 14.

8. G. H. Ojha, *The Palaeography of India*, Plate XII.

9. For accounts of these monuments see : *Progress Report of the Asst. Archaeological Superintendent for Epigraphy*, Southern Circle, 1907, p. 46 ; 1911-12, p. 57 ; 1928, p. 1 For plates see *ibid.* 1911-12, facing p. 57 and 1915, facing page 86.

Also, *Proceedings and Transactions of the Third Oriental Conference*—Madras, 1924, pp. 275-308 ; *ibid.*, Poona, 1919, pp. 325-348.

10. *Proceedings and Transactions of the Third Oriental Conference*, Madras, p. 280.

cal resemblances, in some of these caves are found carved in the living rock, small bed-steads for the use of those who dwelt in them—a feature found in some of the caves at Mihintale and Vessagiriya.

Though these South Indian cave records, like their counterparts in Ceylon are generally very short and represent only a portion of the alphabet, yet there is sufficient material to show the remarkable affinity between these and the early cave records of Ceylon. The letters well represented in the South Indian records, i.e., *u, e, ka, ca, ta, pa, ya* and *ra* resemble those found in the inscriptions at Vessagiriya and Riṭigala. But the more remarkable affinities are noticeable in the letters *a*,[11] *i* and *ma*. The initial vowel *i* is identical with that used in the early Brāhmī records of Ceylon consisting of a vertical stroke on either side of which are placed two dots half way up its length. The letter *ma*, as in the Ceylon records, consists of a U-tube like curve, the vertical strokes of which opening upwards are connected by a cross-bar at the middle.

Equally remarkable affinities to the Brāhmī alphabet of the early cave records of Ceylon are found in the inscriptions carved on pottery discovered at Arikamedu in South India and assigned to the 1st and the 2nd century A.D. on the basis of associated finds.[12] The letters occurring in these inscriptions, while possessing general characteristics not noticeable in the records of Asoka or in the early cave records of Ceylon,[13] contain the *i* and the *ma* peculiar to the records of Ceylon and of South India mentioned earlier.

Thus we have three sets of Brāhmī records with the two peculiar characters, the *i* and the *ma*, i.e. the inscriptions in the Pāṇḍya Country in South India, the early cave records of Ceylon belonging roughly to the same period and the inscriptions on pottery found at Arikamedu belonging to a later period, but representing, perhaps, the same tradition as that of the first two sets of records. Probably these records were carved by the scribes of one and the same school and if so, it has to be assumed that a school of scribes, differing in several respects from those who carved the records of Asoka, was existing in South India and Ceylon and was practising its art in these regions even before the time of Asoka.

This school of Brāhmī must have migrated to South India and Ceylon at least a century or two earlier, for by the time of Asoka the Northern School had forgotten the South Indian forms of *i* and *ma*. Bühler admitted the

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11. Cf. '*a*' occurring in records at Tirupparangunram, Karungalakkuḍi, Kongarpuliyangulam and Mettupatti in plate facing p. 57, *Progress Report of S. I. Epigraphy*, 1911-12, with the '*a*' occurring in Vessagiriya Rock B, cave No. 1, in plate 5, *Epigraphia Zeylanica*, Vol. I and *Āṇḍiyakanda Caves* 1, 2 and 3 in Plate 18, *E.Z.*, Vol. I and 3rd letter in Column 1, 2nd and 4th letter in Column 2 and 1st letter in Columns 1, 2 and 3 in Nicholas' chart.

12. *Ancient India* (*Bulletin of the Archaeological Survey of India*), No. 2, p. 109.

13. This may be due to the material on which the letters are incised.

possibility of the Brāhmī alphabet being introduced to Ceylon before the time of Asoka by Indian colonists.[14]

Once Brāhmī was evolved, perhaps from the script of Mohenjo-Dāro, in course of time it seems to have migrated to South India to be the South Indian variety of Brāhmī. From South India, it probably was introduced to Ceylon as a result of the intercourse that existed between this part of India and Ceylon in the very early period.[15]

Once the Brāhmī alphabet was introduced to Ceylon from South India, it was influenced by other elements probably after the arrival in the island of the Buddhist missionaries. That, probably, is the reason why the characters in the early cave records share some of the features of the characters used in the inscriptions of Asoka, situated in the western and southern portions of India, i.e., places such as Girnār, Siddhārpūr and Brahmagiri. Instances are also not wanting in the early Brāhmī records of Ceylon, of letters resembling those occurring in inscriptions of Asoka found in the central and the eastern parts of India such as Delhi, Jaugada and Rummindēī.[16] These northern and eastern influences can easily be explained when we remember that there were two well known routes to Ceylon from North India—a western route and an eastern route. Differences due to these two streams of immigration are also reflected in the Sinhalese language.[17] However, the possibility is there that the eastern and western elements in the Brāhmī alphabet got mixed up in India itself,[18] and that these influences reached Ceylon after such an admixture, as perhaps happened to a certain extent in Sinhalese-Prakrit.

It was indeed only after the advent of Buddhist monks from India that the early Sinhalese busied themselves in the pursuit of cultural activities and when the Brāhmī alphabet became enriched with the influences brought by the Buddhist monks, it became popular among the people as is shown by the large number of Brāhmī inscriptions scattered throughout the country.

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14. *Indian Palaeography*, p. 33.

15. K. V. Subrahmanya Ayyar who studied the inscriptions of the caves in the Pāṇḍyan Country, relying on Chapter XX, vv. 54-56 of the *Mahāvaṃsa* as translated by L. C. Wijesinghe is inclined to believe that Mahinda and Ariṭṭha went to South India from Ceylon to propagate the teachings of the Buddha ; but the original Pāli of the *Mahāvaṃsa* does not warrant such a conclusion.

Proceedings and Transactions of the Third Oriental Conference, Madras, p. 281.

16. These affinities will be noted in the detailed description of the Alphabet, below.

17. W. Geiger, *A Grammar of the Sinhalese Language*, 1938, p. 3.

18. Hultzsch, E., *Asoka*, plate facing p. 4, Second Girnār Rock Edict, lines 1 and 2, where three different types of '*ta*' are found ; plate facing p. 94, Separate Rock Edict of Dhauli, lines 1, 2, 3, 8 and 12 for different types of '*ta*', and lines 3, 7, 15, 19 for different types of '*da*'. In Separate Edict II at Dhauli, plate facing p. 100, the predominant '*ya*' is the form common in the Western Records of Asoka, but in the other inscriptions of Asoka at Dhauli the '*ya*' used is the notched type.

Since then for nearly a thousand years the Brāhmī alphabet of Ceylon shared almost the same rate of development as the alphabet used in India. This is as it should have been, for after the introduction of Buddhism the cultural links between different parts of India and Ceylon became strengthened as had never been before.

For the purpose of studying the development of the Brāhmī script in Ceylon and its gradual transformation into the Sinhalese script I propose to divide the period from the 3rd century B.C. to the close of the 7th century A.D. into two stages.[19]

1. The early Brāhmī stage, from the earliest times to the end of the first half of the first century B.C.
2. The later Brāhmī stage, from the beginning of the second half of the first century B.C. to the close of the 7th century A.D.

The Early Brāhmī Stage

Before discussing individual letters of the early Brāhmī stage, perhaps it is not out of place here to offer a few remarks on the main features of the characters used during this period. Most of the records are engraved on the drip ledges of rock-caves and are therefore essentially short, rarely running into more than a dozen words. Mainly because of the uneven surfaces on which these records are engraved these early records lack that monumental gracefulness so characteristic of the inscriptions of Asoka.

Another interesting feature of these records is the absence, except in a few cases, of long initial and medial vowels[20] and of conjunct consonants,[21] both of which occur in the inscriptions of Asoka. But, the fact that long vowels and conjunct consonants did actually exist phonetically though not represented graphically is testified to by linguistic evidence.[22] Yet another very common feature shared by most of the early Brāhmī records of Ceylon is the occurrence in one and the same inscription of a variety of forms of one single letter.

The '*a*' among vowels and *ta, ma, ya* and *ra* among the consonants are the letters that commonly lend themselves to variant forms in the same record[23].

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19. A vertical line drawn downwards in Nicholas' chart at the end of the column demarcating the first half of the first century B.C., will make clear the reasons for such a division.

20. In an inscription of the Gallena Vihara in the N.W. Province, medial *ā* occurs as follows :—devānapiya mahā rāja gāmaṇi Abhayasa puta Tisayasa maha leṇa agatānāgata cātu disa sagasa. See Parker, *Ancient Ceylon*, pp. 445-446, Nos. 66 and 68.

21. *Epigraphia Zeylanica*, Vol. 1, p. 15.

22. *A Dictionary of the Sinhalese Language*, 1935, p. XXV.

23. See for '*a*', Āṇḍiyakanda 2, *E.Z.* I, plate 18; for '*ta*', Āṇḍiyakanda 1, *E.Z.* I, Plate 18, also Vessagiriya Rock B. Cave Nos. 1, 2, *E.Z.* Vol. I, Plate 5; for *ma*, Vevälänna Rock, *E.Z.* I, Plate 19; for '*ya*', *E.Z.* I, Plate 6, Rock C, Cave No. 6; for '*ra*', *E.Z.* I, Plate 5, Cave No. 2(*b*).

Though the Brāhmī records of the early stage, as are the later ones, are usually written from left to right, there are a few records which are written from the right to the left or in which the letters are written inverted or upside down.[24] In an inscription in the Gurugalleṇa at Ambalankanda in the Kegalla District there is such an inscription written from the right to the left with some characters inverted, the rest being left in their regular positions.[25] Parker has recorded an instance where the letters are not only written from the right to the left, but also are turned upside down and reversed.[26] It is curious to note that one of the cave records of the Pāṇḍyan Country noticed earlier contains letters written upside down.[27]

The form and development of the individual characters of the early Brāhmī stage also need some comment.

A. As in the records of Asokan inscriptions, the vowel '*a*' of the early Brāhmī stage provides an interesting variety of forms. It would appear that there were three main forms of '*a*'—all, perhaps, derived from a primitive form which may have been somewhat like the '*a*' of the Eran coin, Bühler, *Indian Palaeography*, Tafel I, col. I. The first, similar to the capital letter K, but turned towards the left, the second with the two arms curved instead of being straight, and the third with angular arms, the bends being almost right angles as represented in the 1st letter of Column 2 of Nicholas' chart.[28] The other forms of the letter are either developments from these letters or hybrid forms. Column 4 shows how cursive forms came into being at the beginning of the 1st century B.C.

I. In the period up to the first half of the first century B.C. this vowel is represented in Ceylon by a vertical stroke on either side of which at the middle are two dots. This symbol does not occur in the inscriptions of Asoka, nor is it known to occur in any other North Indian document of the same period. However, as stated already, it occurs in some inscriptions of 300-200 B.C. found in South India, together with the alternative form, consisting of three dots, which in these records is said to represent long '*i*'.[29] Arikamedu pottery too contains this symbol.[30] It seems therefore that these two forms

24. In this connection I should like to quote a remark of the famous Egyptologist W. M. Flinders Petrie : "This same lack of direction may often be seen in uneducated writing, where such letters as N and S and Z are reversed. The turned S may even be seen in the epitaph of an archbishop of Ravenna." (*The Formation of the Alphabet*, p. 4).

25. H. C. P. Bell, *Kegalla Report*, p. 69.

26. Parker, *Ancient Ceylon*, p. 421. Ins. No. 42.

27. *Proceedings and Transactions of the First Oriental Conference*, Poona, 1919, p. 339.

28. For the purpose of this article the vertical columns in Nicholas' chart are numbered serially, column No. 1 being the first column with the key letters.

29. *A.R.S.I.E.*, 1911-12, plate facing p. 57, Kongarpuliyangulam and Tirupparangunram Ins.

30. *Ancient India* (*Bulletin of the Archaeological Survey of India*), No. 2, p. 110.

were used indiscriminately to denote short '*i*', but the '*i*' with the vertical stroke and two dots later became confined to the representation of the long vowel. Bühler has observed in the Gupta inscriptions of the 5th century A.D. at Sāñci a long '*i*' which is a derivative of the '*i*' of the early Brāhmī records of Ceylon and South India.[31] A similar '*i*' has been noticed by Ojha in the Amarāvati and Jaggayyapeṭa inscriptions of the 2nd and 3rd centuries A.D.[32]

Later South Indian alphabets such as the Tamil Grantha, the later Pallava and the early Chola alphabets retained a modified form of this letter to represent long '*i*'.[33] The modern Sinhalese long *ī* is also a development of the Brāhmī '*i*' with the vertical and two dots derived probably through the Grantha. In the early Brāhmī inscriptions of India, long '*i*' was represented by four dots placed as if to mark the corners of a square.[34]

U. There is hardly any noticeable difference between this character as represented in Ceylon and in the records of Asoka.

E. This letter as represented in the Ceylon records seems to be more primitive than even the type used in the records of Asoka, which is more cursive. In the latter the base stroke is not always horizontal, nor is the whole symbol symmetrical. The Ceylon letter is represented usually by an isosceles triangle with a horizontal base.

O. This letter is clearly more cursive than the Asokan type, in that its bends are curved and not angular as those found in the records of Asoka.

Ka. The earliest type of this letter represented by a cross formed of lines of equal length, resembles the type found in the Girnār inscriptions of Asoka. But there are other types, assigned to 2nd century B.C. which are less regular, both in the length of strokes and in the manner of their intersection. For example the '*ka*' occurring in rocks B and C at Vessagiriya have their vertical strokes longer than the horizontal strokes.[35]

Kha. This is one of the letters, occurring in the early Brāhmī records which do not resemble any of the well demarcated types found in the inscriptions of Asoka. In these latter the '*kha*' takes the form of a hook opening downwards and terminating in a dot or a small circle or without either. In the Ceylon records the dot or the circle in which the main vertical trunk of the hook terminates is replaced by a continuation of this vertical trunk to form a small circle, a semicircle or a hook.

Ga. The earlier forms of this character are regular. But as is clear in Nicholas' chart the top of the letter tends to be flattened or curved. This perhaps is an indication that some of the scribes started writing a cursive hand as early as the beginning of the 1st century B.C.

31. Bühler, *Indian Palaeography*, Tafel VII, line 3, column I.
32. Ojha, *The Palaeography of India*, Plate XII.
33. *Travancore Archaeological Series*, Vol. I. p. 204.
34. D. C. Sircar, *Select Inscriptions*, Vol. I, Plate XXXIV, line 1.
35. *E.Z.* I, Plate 6, Cave No. 12.

Gha. Up to the first half of the 1st century A.C. the '*gha*' could be generally described as angular and similar in form to the type found in some of Kālsī inscriptions of Asoka, though the latter is generally taller than the Ceylon type which is flat. Compare letters occurring in Nicholas' chart, column 3 with Bühler, *Indian Palaeography*, Tafel II, l. 12, column iii. In some Ceylon records, however, the vertical stroke and the bottom curve on the left hand side tend to be curved, Nicholas' chart columns 4 and 5.

Ca. There are three distinct types :—

1. An angular type of which the lower element is formed of a square.
2. A cursive type with the lower unit curved at the corners.
3. A more developed cursive type.

A form similar to the first type occurs in the Mettuppatti Inscription (*a*);[36] type 2 is similar to the *ca* occurring in some of the Girnār Inscriptions. Type 3 can be compared to some forms occurring in the Brahmagiri Inscriptions of Asoka.[37] In the latter however, sometimes, the lower loop is formed on the right of the vertical stroke. It is to be noted that type 1 does not appear in any of the records of Asoka and that it is perhaps more archaic than any form found in those records.

Cha. This letter seems to be a very much developed form, when compared with the forms occurring in the records of Asoka and other early Brāhmī records of India. The form occurring in column 3 of Nicholas' chart may be compared with *B.I.P.*, Tafel II, l. 14.

Ja. In Nicholas' chart the aspirated form of the letter has been entered alongside with the deaspirated form. The only letter in the second column, the first and the second in the third column and the first in the fourth column represent the aspirated sound. The '*ja*' as represented in column 3 is akin to the forms occurring in the Girnār Inscriptions.[38] But while in the Girnār records the '*ja*' seems generally to be written in one stroke with only a mild projection to the right, the Ceylon form seems to be formed of two separate curves—one an upper flat curve opening towards the right and ending in a horizontal arm and the other a lower curve attached to the lower horizontal arm of the upper curve.

Jha calls for no remarks and is identical with the form found in contemporary Indian documents, as are the next three letters, *ṭa*, *ṭha* and *ḍa*.

Ḍha occurs for the first time in Ceylon in the Tonigala inscription of the fourth century A.D.[39]

Ṇa calls for no remarks except to point out the short cross-bar that cuts across the vertical stroke of the *ṇa* represented in the second letter of column

36. *A.R.S.I.E.*, 1912, Plate facing p. 57.
37. Hultzsch, *Asoka*, Plate facing p. 176, line 1.
38. *Ibid.*, Plate facing p. 4, II, line 1.
39. *E.Z.*, Vol. III, Plate 14.

4 of Nicholas' chart. From this specimen recorded by Nicholas it would appear that this cross-bar made its appearance quite early, although it was only in the 4th century A.D. that it came into general use to differentiate the cerebral ṇa from the dental which had by this time developed a serif.

Ta. In the early Brāhmī records of Ceylon there are three main types of ta. The first type, perhaps, the commonest and the most convenient to write in a script written from left to right, consists of a main vertical or slightly slanting stroke to which is attached at the middle a foot stretching to the right. This type, represented in Nicholas' chart by the first letter in columns 2, 3 and 4, is the representative type in the Girnār Inscriptions. The second type, not so common as the first, has the foot attached to it on the left and the main vertical stroke often inclines to the left. This form occurs in a Vessagiriya[40] record and is more commonly found in the records of Asoka,[41] such as those at Brahmagiri and Dhauli. The third type consists of a vertical stroke from the lower end of which stretch out to the left and the right two short strokes of equal length.[42] This form is typical of the records of Asoka found in the central and the eastern parts of India, such as those found at Delhi, Calcutta and Rummindēī. This type also occurs side by side with other forms in western and southern records of Asoka, such as Girnār and Brahmagiri.[43] Cursive forms of the first type are represented in Nicholas' chart by the second letter in columns 2 and 3, the second, the third and the fifth letter of column 4. A cursive form of the third type is represented by the fourth letter of column 4.

Tha. This letter is identical with the '*tha*' in contemporary records in India.

Da. There are four main types of '*da.*' The most archaic and therefore perhaps the earliest is angular and resembles the type occurring in the Delhi inscriptions of Asoka.[44] A type similar to this occurs in some of the Asokan records at Dhauli.[45]

The second type consists of a semicircle like curve opening towards the left, to the two ends of which are attached two vertical strokes. This type is widely distributed throughout India. The third type has an irregular and wide mouthed curve, col. 2, 3rd letter in Nicholas' chart. This type resembles the type occurring in the Girnār Inscriptions of Asoka. The fourth type, a very much developed form is represented in Nicholas' chart by the last two letters in column 4.

40. *Epigraphia Zeylanica*, Vol. I, Plate 5, Rock B, Cave No. 1, l. 2.
41. Hultzsch, *Asoka*, Plate facing p. 176, l. 2 and Plate facing p. 94, ll. 1, 2, 3 and 8.
42. *Epigraphia Zeylanica*, Vol. I, Plate 6, Rock B, Cave No. 6.
43. Hultzsch, *Asoka*, Plate facing p. 176, ll. 1, 2 and 5 and Plate facing p. 4, II, ll. 1 and 2.
44. *B.I.P.*, Talef II, l. 25, columns IV and V.
45. Hultzsch, *Asoka*, Plate facing p. 88, Iv, l. 5.

Dha.[46] As in the inscriptions of Asoka the '*dha*' in the early Brāhmī records of Ceylon is written in two ways : with the vertical stroke on the left and on the right. The latter type is used occasionally, as in inscription No. 62, Parker, p. 421.

Na. In the early Brāhmī stage this letter has not undergone any changes worthy of note.

Pa. This letter is represented by two main types. In one, evidently the more archaic, the bottom is flat, while in the other the bottom is curved. The first type with a dead flat bottom does not seem to appear in contemporary records in India, though a form somewhat similar occurs in the Brahmagiri inscription of Asoka.[47] This type however makes its appearance later in the Pabhosā and the Hāthīgumphā inscriptions attributed by Bühler to 150 and 160 B.C., but now attributed to the end of the first century B.C.

Pha does not appear to have been noticed by Nicholas in the early Brāhmī inscriptions.

Ba. This letter, as occurring in the early Brāhmī records, is regular in the sense that it does not lend itself to fundamentally variant forms. But it does not remain in all inscriptions in the shape of a regular square. It is noteworthy that advanced forms found in India as late as the 2nd century A.C. begin to make their appearance in Ceylon even as early as 2nd century B.C., cf. Nicholas third column, second letter and *B.I.P.*, Tafel III, l. 28, Col. VI. This shows that as early as 2nd century B.C. the Brāhmī script had developed to a point when some characters produced a variety of forms used contemporaneously.

Bha. The earliest '*bha*' noticed by Nicholas seems to be a freak form occurring in an inscription found at Galleṇa Vihāra in the Vanni Hatpattu.

Ma. This is one of the letters that has produced a number of variant forms both in India and in Ceylon.

The main types found in Ceylon during the early Brāhmī stage are as follows :—

Type 1. The square form represented in Nicholas' chart by the first letter in columns 2, 3 and 4.

Type 2. This is a derivative of type 1, the difference being that the bottom of this type is curved. It is represented by the second letter in columns 2, 3 and 4 in Nicholas' chart.

Type 3. This variety is formed of a circle to the top of which are attached two short strokes that curve inwards, (cf. '*ma*' in *B.I.P.*, Tafel II, Col. IV).

46. The conjunct consonant *ddha* has been inserted with the letter *dha* in Nicholas' chart. It should be noted that *ddha* is represented by the third and the fourth symbols in column 5, by the third in column 6, by the second in column 7, by the third, fourth and fifth in column 8, and by all the symbols in columns 9, 10, 11 and 12.

47. Hultzsch, *Asoka*, plate facing p. 176, l. 3.

Type 4. This type of '*ma*' resembles the typical '*ma*' in the Girnār inscriptions of Asoka. (*B.I.P.*, Tafel II, Col. IX). It is to be distinguished from the '*ma*' in which the two short upward strokes are added to the body of the letter. (*B.I.P.*, Tafel II, Col. VIII).

Type 5. This is a very much developed type, almost similar to the form that was prevalent in the later Brāhmī period, but without the serif. This advanced type may be compared with the type found in the Nāsik inscriptions of a later period. (*B.I.P.*, Tafel III, Col. XIII).

Ya. This letter generally resembles the type found in the Girnār inscriptions of Asoka. It is noteworthy, that in some of these letters the vertical stroke does not touch the bottom curve. (See *E.Z.* I., plate facing p. 144, inscription No. 1). The notched '*ya*,' typical of the inscriptions of Asoka found in the eastern portion of India, occurs in Ceylon occasionally (see Parker, *Ancient Ceylon*, p. 421 inscription No. 57).

Ra. The '*ra*' is represented by three main types: the cork-screw type, the type with a slightly wavy line and the type formed of a straight vertical stroke. The first two types are frequently met with in the Girnār and Siddhārpur inscriptions of Asoka.

La. This letter, during this period resembles the type found in the Girnār inscriptions. But as in the case of the '*ma*' (with the angular bottom) a few have a square base. A similar type is noted by Bühler in the Kālsi and Delhi Inscriptions of Asoka. (*B.I.P.*, Tafel II, l. 35, Cols. III and V).

Va. This letter is regular, but developed forms begin to appear in the 2nd century B.C., when the lower curve tends to become triangular. In the first half of the 1st century B.C. a well developed form with a triangular bottom makes its appearance.

Śa. The Ceylon type of *śa* resembles the type in the Kālsi inscription of Asoka. The arrow-shaped *śa* (see *B.I.P.*, Tafel II, l. 37, Cols. III and XI) and the one with the curved top (*ibid.* Cols. XIII and XIV) are not noticed in Ceylon.

Sa. A peculiarity of the earliest '*sa*' occurring in the early Brāhmī records is that it has an angular left limb instead of a curved one. Later '*sa*'s of this period conform to the common type of '*sa*' found in the inscriptions of Asoka. During the last stages of this period—i.e. in the 1st half of the 1st century B.C. the left limb and the body of the letter both undergo certain changes in form.[48]

Ha. This letter resembles the Girnār type, in which the horizontal stroke on the right is attached to the body of the letter at the end of the shorter

48. Cf. especially 1st and 2nd letters in column 3 of Nicholas' chart.

vertical stroke. Perhaps a 'reminiscence' of this letter occurs at Āṇḍiākanda, cave No. 5.[49] A character similar to those occurring in the southern inscriptions of Asoka, i.e. a *'ha'* in which the horizontal stroke on the right inclines downwards showing that originally the horizontal stroke was attached to the right arm of the letter somewhere below its extremity, occurs in an inscription at Kūragala in Sabaragamuwa Bintänna.[50]

Ḷa. The earliest instance, according to Bühler, where the cerebral *ḷa* occurs is the inscriptions at the Bhaṭṭiprolu Stūpa. The *ḷa* in these records consists of a vertical stroke curving towards the right and forming a hook. Two short horizontal strokes are added on the right, one to the top of the main vertical stroke and the other about half way down it. A more developed form is noticed at Bharhūt and Pabhosa, Bühler, Tafel II, cols. XVIII and XX. But the type that occurs in Ceylon bears a distinct resemblance to the type occurring in the records of Uṣavadāta, Bühler, Tafel III, Cols. VII and VIII, and in some Jaina inscriptions from Mathura.[51] It was generally believed that the cerebral *ḷa* did not occur in the records of Asoka, but H. Leuders[52] has shown that it does occur in several inscriptions. This letter is the same as the Asokan *ḍa* but the lower end of the lower vertical stroke has thickened into a dot.[53] There is no doubt that it is this form that later developed into the symbol recorded in cols. 4 and 5 of Nicholas' chart. Just as the angular *ḍa* later became round in form the *ḷa* too seems to have assumed a round form and the dot which was at the end of the lower vertical seems to have developed into a small semicircle opening towards the right, cf. *ḍa* in cols. 3, 4 and 5 and *ḷa* in columns 4, 5 and 6 in Nicholas' chart.

The foregoing comments on the characteristics of the individual letters of the script used in Ceylon would show that the letters can be divided into three groups: 1. The letters which are peculiar to Ceylon, 2. The letters which are similar to those occurring in the records of Asoka found in the western and southern parts of India, such as Girnār, Brahmagiri and Siddhārpur, and 3. The letters which are similar to those occurring in the same records found in the central and eastern parts of India. Further, it would have been observed that several characters used during the early Brāhmī period in Ceylon show a considerable affinity to the types occurring in the inscriptions of Asoka found in the west and the south of India. Such affinities can be seen in *a, ja, ta, da, ma, ya* and *ha*. It may also be added that a study of the early records of Ceylon shows that where a letter in the records of Asoka has deve-

49. See *Epigraphia Zeylanica*, Vol. I, Plate 18, No. 5, 5th letter.

50. *J.R.A.S.* (C.B.) XXXII, p. 167; also *E.Z.* I, Plate 6, Rock C, Cave No. 6, 2nd letter.

51. *Epigraphia Indica*, Vol. I. Plate facing p. 393, Ins. No. XXVIII.

52. *J.R.A.S.* (of Great Britain and Ireland) 1911, pp. 1081—1089.

53. Hultzsch, *Asoka*, Lauriya-Nandangarh Pillar VI, l. 1, in plate facing p. 150 and Delhi-Mirath Pillar V. l. 11, in plate facing p. 140.

loped two forms—one peculiar to the west and the south and the other to the east of India, the Ceylon records seem to have shown a preference for the western or the southern type. It should, however, be remembered that forms peculiar to the central and eastern parts of India too occur side by side with the commoner forms.

The Later Brāhmī Stage

The later Brāhmī stage extends from the close of the first half of the first century B.C. to the close of the first half of the 5th century A.D., with a further transitional period of about two centuries. Roughly the upper and lower limits of this period excluding the transitional period correspond to the end of the reign of Vaṭṭagāmani and to the end of the reign of Kassapa I.

The main developments in the Brāhmī script of this period may be indicated thus :

1. Letters having the vertical strokes develop the so-called serif—a short horizontal stroke attached to the top of a vertical stroke.
2. Lengthening of the lower ends of vertical strokes, which sometimes curve towards the left, after being lengthened.
3. The right vertical stroke of *la*—is lengthened upwards and sometimes it curves to the right and later to the left.
4. Lower unit of *ḍa* and *ḷa* tends to be curved, opening towards the right.
5. Circular limbs of *va* and *ma* sometimes take the form of a triangle.
6. In letters having two vertical arms of unequal height in the early Brāhmī period the arms become equal in height.
7. Angular letters and angular limbs of letters become round—*e*, *ga* and *ta* (but in Nicholas' chart, the cursive form of ' *e* ' does not appear).

Though these changes become most prominent in the second half of the 1st century B.C. with the introduction of the serif, the tendency to adopt cursive forms is noticeable even as early as the first half of the first century B.C. As in India, even in the records of Asoka, cursive forms found a place side by side with the archaic forms, even so in Ceylon one finds advanced forms making their appearance quite early, e.g., *ga*, *ca*, *ta* and *da* of the first half of the first century B.C. in Nicholas' chart. A certain stage of development that was noticeable in India, both in the north and in the south, seems to be totally absent in Ceylon. Prior to the appearance of the serif in India, the top and bottom ends of strokes in Brāhmī characters were thickened.[54] This stage which lasted during the century and a half immediately preceding the Christian era seems to have eluded Ceylon, when the serif seems to have been introduced immediately after the early Brāhmī stage.[55] A noteworthy

54. Bhārhut, Pabhosa, Hāthīgumphā and Nānāghāt scripts in Bühler, *Indian Palaeography*, Tafel II.

55. In the Slab Inscription of Khudda Pārinda the serif does not seem to have been fully developed. In certain letters there is only a thickening of the upper extremities of vertical strokes, *E.Z.* IV, Plate 11.

feature of the script of the period under review is the recurrence of old forms of letters at times when they should be regarded as obsolete. For example the short '*i*' with the vertical line and two dots occurs in an inscription of the 5th century.[56] The inscribed slabs recently unearthed at the Dakkhiṇa Vihārē, Anurādhapura, are also noteworthy for the obsolete form of the script used therein. Though the script may be assigned to the second or the third century A.C. the record contains a reference to a king named *Daḷopatisa*, Dāṭhopatissa (640-652 A.D.).

A study of the column in Nicholas' chart, for the first half of the 1st century B.C. and the subsequent periods will give a clear idea of the development that occurred in the Brāhmī script in Ceylon round about the 1st century A.D. and of how these developments were slowly but surely carried on till the end of the 5th century when we come across a period of transition.

As far back as 1881, Edward Müller recognized the affinities between the Ceylon records of the first and second centuries A.D. and those in the caves in Western India.[57] Why the developments indicated above should appear at the close of the 1st century B.C. and why there should be this affinity between the styles of writing in Ceylon and that in Western India, can, perhaps be explained if we pause a moment over the relations between India and Ceylon round about the beginning of the Christian era. Cultural relations between India and Ceylon established by Mahinda continued to benefit the two countries and to keep them in touch with each other for centuries thereafter. In the reign of King Duṭṭhagāmaṇi it appears that Ceylon had connections with several parts of India.[58]

During the reign of Vaṭṭagāmaṇi, when the Brāhmaṇa Tissa revolt and famine occurred large numbers of bhikkhus, perhaps, some of the most learned among them, are said to have gone across the sea to South India, and to have remained there till conditions at home had settled down before returning to Ceylon.[59] Bhikkhuṇīs were also invited from India by Vaṭṭagāmaṇi to teach the *Vinaya* in Anurādhapura.[60] Constant intercourse between different places in the Āndhra country and Ceylon had also been established in very early times, as a result of well-established trade-routes.[61] The practice of commencing an inscription with the auspicious word '*Siddham*', perhaps, bears testimony to this close association between Ceylon and the Andhra country.[62] Further-

56. See Nicholas' chart and also Müller, *Ancient Inscriptions of Ceylon*, (Plates) No. 85
57. Müller, *Ancient Inscriptions of Ceylon*, p. 27.
58. *Mahāvaṃsa*, XXIX, 32-43.
59. Adikāram, *Early History of Buddhism in Ceylon*, pp. 73, 74.
60. *Ibid.*, p. 77.
61. B. V. Krishnarao, *A History of the Early Dynasties of Andhradesa*, pp. 75 and 79.
62. See *Epigraphia Zeylanica*, Vol. I, p. 22, and p. 69 and D. C. Sircar, *Select Indian. Inscriptions*, Vol. I, p. 186. This word occurs in a large number of Inscriptions at Kuḍā, Karle, Junnar and Kāṇheri. See Burgess and Indraji, *Inscriptions from the Cave Temples of Western India*, plates facing pages 4, 16, 33, 36, 37, 38 and 51.

more the close of the first century B.C. saw the occurrence of two events which had far reaching effects on the religion and culture of the people of Ceylon. The first was the occurrence of a schism in the Saṅgha of Ceylon for the first time and the second was the committing of the *Tipiṭaka* and other Buddhist texts to writing. While the first event set afoot a series of controversies and dissensions in the Buddhist order, the second laid the foundations of the first period of literary activity in Ceylon. The intermittent emergence of Mahāyānist tendencies in the important vihāras of Anurādhapura and the resulting controversies must, indeed, have had their repercussions on the script that was used in the country. For instance Ceylon's associations[63] with Nāgārjunikoṇḍa, the celebrated centre of Mahāyānist learning in South India seems to have had a very palpable effect on the script used in Ceylon in the 3rd century A.D. The highly ornate characters used in the fragmentary inscriptions from Jetavanārāma bear clear signs of being influenced by the style of writing used in the many inscriptions discovered at Nāgārjunikoṇḍa.[64] The *i* formed of three short curved strokes placed in a circle, used in Ceylon in the 3rd and the fourth century A.D. seems to be a variation of the form used at Nāgārjuṇikoṇḍa.

Before concluding this paper it is perhaps not out of place here to add a few remarks about materials used for writing on and their bearing on the development of the script employed in Ceylon. The commonest material on which the oldest records are inscribed is stone and there is at least one instance when marble too has been employed for the same purpose.[65] Gold plates too, it would appear, were sometimes used as a writing material but the very rarity of the metal would have placed it beyond the reach of the common man. Mahinda's prediction that the Lohapāsāda would be built by Duṭṭhagāmaṇi was written on a gold plate kept in a chest.[66] The only instance, we know, of a gold plate being used for this purpose is the Vallipuram gold plate of the 2nd century A.D. found in Jaffna.[67] There is also the popular belief that the *Tipiṭaka* was written on plates of gold and that they were deposited in a rock at Aluvihāra.[68] Copper in the form of plates forming a book, was a very common writing material in India, but in Ceylon the earliest known copper-plate record is the recently discovered grant of Vijayabāhu I. But we have

63. *Epigraphia Indica*, Vol. XX, p. 16, *et. seq.*
64. *Epigraphia Zeylanica*, Vol. IV, pp. 273-285 and Plate 27.
65. *Jetavanārāma Fragmentary Inscription*, *E.Z.*, IV, p. 274.
66. *Mahāvaṃsa*, XXVII; vv. 5-6.
67. *E.Z.* IV, p. 229.
68. Adikāram, *Early History of Buddhism in Ceylon*, p. 79, and *Mahāvaṃsa*, XXXIII, v. 100.

instances of copper plaques and clay tablets containing inscribed religious formulae, deposited in shrines in the 7th or the 8th century.[69]

The literature of the period offers us little help by way of providing information on the writing materials used in ancient Ceylon. But the *Mahāvaṃsa* contains a few references, which throw some light on this problem. We are told for instance, that Vaṭṭagāmaṇi while in hiding at Vessagiri made a grant of land to a bhikkhu on a ketaka leaf,[70] (Pandanus Odoratissimus). In India cotton cloth and silk were also used for writing official and private documents,[71] and it appears that this practice was prevalent in Ceylon too. We are told in the *Mahāvaṃsa*, that when the eight theras who were sent to the heaven of the thirty-three gods to make a plan for the Lohapāsāda, they copied the plan " with vermillion (hingulinā) on a linen cloth."[72] Asoka is said to have used red arsenic (manosilā) with a gold tulikā to mark a line on the branch of the Bodhi tree, before it severed itself from the main tree.[73] The *Samantapāsādikā* refers to mercury and sulphur compounds, red arsenic, yellow orpiment and black pigment as *bhājanīyabhaṇḍāni*.[74] One of the relic caskets recently discovered at the southern Vāhalkaḍa of the Ruvanvälisäya has an inscription faintly incised on the outside and painted over with a kind of ink. On palaeographic grounds the inscription has been assigned to the 2nd century A.D.[75] "*Manosilā*" and "*hinguli*", which were used as substitutes for ink were applied on to the writing material with a brush—Pali, *tulikā*; Sinhalese, *tella*.

A very common material which has been used for writing on for centuries in Ceylon is the ola,[76] but it is difficult to find out exactly when it came into use in Ceylon. The oldest ola leaf manuscripts which are known to me are, (1) a manuscript of the Cullavagga deposited in the Colombo Museum Library, assigned to the Dambadeniya period by Dr. S. Paranavitāna and (2) a manuscript of the Visuddhi Magga Ṭīkā available in the library of the University of Ceylon, which too can be considered to have been written during the same period. Dr. Paranavitāna has suggested that the ola leaf came into use in Ceylon somewhere in the 8th century.[77] This suggestion is based on the

69. *Epigraphia Zeylanica*, III, p. 200, Copper plaques have been found also at Vijayārāma monastery. See *A. S. C. Annual Report*, 1891, pp. 12-15, also see K. A. Nilakantha Sastri, *Foreign Notices of South India*, p. 74, where Fā-Hien says that kings of Ceylon recorded grants of land on metal plates. See also *E.Z.*, III, p. 171.

70. *Mahāvaṃsa*, XXXIII, v. 50.

71. Bühler, *Indian Palaeography*, p. 92.

72. *Mahāvaṃsa*, XXVII, v. 18. Vermillion is described as a brilliant scarlet pigment obtained from the sulphide of mercury in its natural form.

73. *Mahāvaṃsa*, XVIII, vv. 38-39.

74. *Samantapāsādikā*, P.T.S. Edition, 1947, p. 1243.

75. *J.R.A.S.* (C.B.), XXXVII, p. 7.

76. There are two varieties of palms in Ceylon: (1) Corypha Umbraculifera, Sinh. *tala*, Tamil *talpattu*. (2) Borassus Flabellifer, Sinh. *tal*, Tamil *panai*. The first is used more commonly for books in Ceylon.

77. Introduction to Nāgirikanda Rock Inscription, *E.Z.*, IV, pp. 115-122.

sudden development of the letters of Brāhmī alphabet into an alphabet of round forms. According to his theory, this sudden change is due to a change in the writing materials used, namely to the substitution of ola leaves in place of some other material which had been used in the period up to the 6th century. This material, he has suggested, was bamboo boards. In support of his theory that bamboo boards were used as writing material in ancient Ceylon, Dr. Paranavitāna quotes the phrase '*potthakavaṃsaphalake vaṇṇādikammāni viya*' from the Vaṃsatthappakāsinī, the Commentary to the *Mahāvaṃsa*. Taken in its proper context, i.e. as a comment on stanza 13 of Chapter XI of the *Mahāvaṃsa* it would be quite clear that '*potthakavaṃsaphalaka*' refers to the bamboo-board covers of a book and not to the bamboo-boards forming the book itself. The term '*vaṇṇādikamma*' refers to the decorative floral and other designs in colour which are often painted on the wooden boards that form the covers of ola leaf manuscripts.

On the other hand an examination of Nicholas' chart has shown that round forms are found even in the early stages of the Brāhmī script[78] and that the number of round forms increased progressively till the 5th century A.D. when the only form which could not be written without using a horizontal stroke was the letter '*ṇa*'. The following table indicates the number of angular forms and round forms at different periods :—

Details of Letters	*2nd Half of 3rd Century B.C.*	*1st Half of 1st Century B.C.*	*5th Century A.C.*
Number of letters having one or more horizontal strokes	17	16	12
Number of letters having one or more horizontal strokes for which there are alternative forms without horizontal strokes	9	12	11
Number of letters with horizontal strokes, for which there are no alternative forms	8	4	1
Number of letters without horizontal strokes	26	30	33

As seen in the figures above, even if it is assumed that ola leaves came into use after the 5th century it would not have been necessary to change the alphabet in order to accommodate the ola leaf. Furthermore it is not altogether impossible for angular forms or letters with horizontal strokes to be written

78. Dr. Paranavitāna admits this.

on ola leaves, but only a certain degree of care has to be exercised when incising horizontal strokes. In fact, ola leaves have been used for copying works in Tamil and Nāgarī characters which are angular and of which many have horizontal strokes.[79]

The palm tree is commonly mentioned in the *Tipiṭaka* and Burnell says that its use is of considerable age,[80] and that in the seventh century A.D. this material is repeatedly mentioned in the life and travels of Hiouen Thsang. Palm trees are commonly grown in certain parts of Ceylon. In the *Samantapāsādikā*, in the course of the discussion on the Pācittiya rules, Buddhaghosa says that a monk who incises letters on palm leaves while they are in the tree commits an offence.[81] Describing the different kinds of coins the same work refers to māsaka coins made of ola leaf with figures incised on them.[82]

Explaining what articles can be termed "*garubhaṇḍa*" the *Samantapāsādikā* says that even a single ola leaf (*tāḷapaṇṇa*) can be regarded as a *garubhaṇḍa* provided it is offered to the Sangha as a community.[83] In this place the word *tāḷapaṇṇa* can be understood in the sense of the original palm-leaf unprepared and uncut. But a few lines below in dealing with the same subject Buddhaghosa goes on to say that even a blank book, *rittapotthako*, can be regarded as a "*garubhaṇḍa*", be it even only eight inches in length. The handle of a style eight inches in length *aṭṭhangulasūcidaṇḍa* is also referred to in the same connection.

The evidence adduced above seems to me to be sufficient to establish the fact that the practice of using palm leaves as a writing material was known in Ceylon in the 5th century the latest. The efficiency of the palm-leaf as a writing material, particularly its resilience, thinness, durability and lightness of weight would have made it popular in the country and would have supplanted all other varieties of writing material used earlier.[84]

If it was not the appearance of the ola-leaf that transformed the script used in 5th and the 6th centuries into what it became in the subsequent period, other explanations have now to be sought for this unexpected trans-

79. Burnell, *Elements of South Indian Palaeography*, Plate XXI; also, Rev. W. Taylor• *Catalogue Raisonneé of Oriental Manuscripts*.

80. Burnell, *Elements of South Indian Palaeography*, p. 85.

81. *Samantapāsādikā*. P.T.S. Edition, p. 765: "Hattha-kukkuccena mudukesu indasālanuhīkhandādīsu vā tattha jātakatāḷapaṇṇādīsu vā akkharaṃ chindantassāpi eseva nayo".

82. *Ibid.*, p. 499: "Tattha kahāpaṇoti suvaṇṇamayo vā rūpīmayo vā pākatiko vā, lohamāsakoti tambalohādīhi katamāsako, dārumāsakoti sāradārunā vā veḷupesikāya vā antamaso tālapaṇṇenāpi rupāṃ chinditvā katamāsako".

83. *Samantapāsādikā*, P.T.S. Edition, 1947. p. 1243. I owe this reference to my colleague Mr. M. Srī Rammaṇḍala.

84 It is interesting to note that in Ceylon in the fifth century the prices of articles exposed for sale were indicated on labels. See *A Record of Buddhistic Kingdoms*, translated by James Legge, 1886, p. 101.

formation. Dr. Paranavitāna has referred to the influence of the Pallava Grantha script on the Sinhalese script.[85] The Sinhalese seem to have had considerable connections with the Pallavas of South India just at the period when these changes in the Sinhalese script referred to above took place.

After the Brāhmī alphabet was introduced to the country the script was ever in a process of development but consistent with the changes that were going on in India. The script which was angular at first, gradually assumed round forms as a concession to convenience and speed. But the period immediately following was one of intense literary activity. The *Dīpavaṃsa* and the *Mahāvaṃsa* and the commentaries of Buddhaghosa were written during this period. Even the layman seems to have begun to interest himself in literary pursuits during this period as is testified to by the earliest forms of the graffitti found on the mirror-wall at Sīgiriya. The *Cūlavaṃsa* says that poets wrote numerous poems in the Sīhala tongue in the reign of Aggabodhi I (564-598 A.D.)[86] and the *Nikāya Sangrahava*[87] and the *Pūjāvaliya*[88] have preserved for us the names of twelve of these poets. Thus it would be seen that there was at this time a genuine demand for a script that would enable writers to produce books with minimum effort and maximum speed. Within limits the script that was already in use in the country had attempted to meet this demand, when Ceylon came in contact with a people who had developed an efficient script. These were the Pallavas of South India, with whom Ceylon had relations from the 6th century onwards. King Sinhaviṣṇu, 580-600 A.D., of the Pallavas is said to have defeated the Sinhalese king at the time. And King Mānavamma of Ceylon (second half of the 7th century) being harassed by Dāṭhopatissa II fled to India and entered the service of the Pallava King Narasiṃhavarman I (630-668A.D.)[89]. In other spheres of art too the Pallavas seem to have influenced the Sinhalese during this period. The Geḍige at Nālandā and some of the sculptures at Isurumuniya are considered to have been executed according to the Pallava style of sculpture.[90] The script of the Pallavas was also used in Ceylon in some inscriptions set up in the 7th or the 8th century.[91] These circumstances, perhaps, led the Sinhalese scribes to adopt at least some of the characters of the Pallava Grantha alphabet. The extent to which this adoption was carried out is beyond the scope of this paper, but a comparison of the script of the 7th and the 8th

85. *E.Z.*, Vol. IV, p. 117.
86. *Cūlavaṃsa* XLII, 13.
87. *Nikāya Sangrahawa* Published Government Printer, 1907, p. 15.
88. *Pūjāvaliya*, ed. Bentota Saddhātissa Thero, p. 730.
89. Codrington, *A Short History of Ceylon*, pp. 35-36.
90. *A.R.A.S.C.*, July, 1937, pp. 16-19. Codrington, *A Short History of Ceylon* p. 186.
91. Tiriyāy Rock Inscription, *E.Z.*, IV, pp. 312—319; the Trikāyastava in an Inscription at Mihintale, *E.Z.*, IV, pp. 242—246.

centuries with the contemporary Pallava Grantha script will show to what extent the latter had a bearing on the development of the Sinhalese script.

By way of summarising the contents of this paper, I may point out the possibility that the Brāhmī alphabet was introduced to Ceylon before the arrival of Mahinda in the reign of King Devānaṃpiya Tissa. Though the evidence provided by the *i* and the *ma* peculiar to Ceylon may not be sufficient for such a conclusion, their occurrence in Ceylon cannot otherwise be explained. Further, the absence of long vowels and conjunct consonants, both of which occur in the records of Asoka, seems to me to support this view. If, as is generally believed the Brāhmī alphabet was introduced by the Buddhist monks who arrived in the time of Devānaṃpiya Tissa, it is difficult to understand why the Sinhalese scribes should have refrained from using long vowels, and conjunct consonants. The changes that occurred in the script in Ceylon at the close of the first century B.C. and how for the next five centuries or so it was influenced first by the script of the western caves in India, such as those at Nasīk and Karle and then perhaps by the script used in the south-eastern part of India have also been pointed out. The next two centuries, it has been shown, was a period of transition towards the end of which the influence of the Pallava Grantha alphabet is seen in the script which was now transforming itself into the Sinhalese script. The different kinds of writing material used in Ceylon in early times have also been discussed and it has been possible to show that the ola leaf was used in Ceylon before the fifth century.

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