The scientific study of old script is called “Palaeography”. It is not confined to the study of the shapes of letters but endeavours to go beyond the mere shapes and search for the different traditions on account of particular techniques. The study of Orissan palaeography is a part of the study of Indian palaeography which grew out of necessity for deciphering the large number of inscriptions found in this subcontinent. The present state of Orissa which lies along the east-coast of India and is bounded by north latitudes 17°49' and 22°34' and east longitudes 81°29' is comparatively rich in epigraphic materials for the study of Orissan palaeography from the time of Asoka to the dawn of the Surya Vamsi rule in about A.D. 1568. The Oriya script, which is traceable to the earliest decipherable alphabet of India, called Brahmi, passed through different stages of development from about the 3rd Century B.C to about the 14th Century A.D. of the Christian era when it assumed the shape of cursive Oriya script with curves forming at the top of letters and then finally came to the present form. The evolution of Orissan script can be traced by the study of large number of inscriptions ranging from the earliest historical period up to about the 16th Century A.D. which have been discovered from different parts of Orissa.

From 3rd Century B.C. to 3rd Century A.D.

The earliest epigraphic records of Orissa are dated back to the time of Asoka. Two sets of Asokan Brahmi edicts have so far been discovered, one at Dhauli on the southern bank of the river Daya near Bhubaneswar and the other at Jaugada on the bank the river Rusikulya in Ganjam district. The letters used in these two rock edicts do not show the regional variations because such type of scripts are found in the far-flung areas of North, South, East and Western India. The letters are cut but chiselled only the lines drawn by the writer. Each letter is definitely formed and no cursive writing in the way of continuous drawn outlines is noticeable. The free movement of hand resulting the round forms and the letters are not having any serif on the top. As studied from the Dhauli and Jaugada rock edicts it is known that dirgha i, dirgha u, ai, au, s’ and sh are absent. In some of the letter it has many more forms which suggests the scribes attitudes towards the writing either on raw materials or to what to develop another form of the same letter as in, a, a, kh, t, th, n and y. In some cases two reversible varieties are noticed as in o and dh. The changes are found in the Hatigumpha inscription of Kharavela out from the Asokan mode of expression. The provincial Brahmi script developed in about the 1st C. B.C like in other regions of India. On the basis of technical achievement and introduction of new writing tool the archaic form optionally met here. The vertical of k is lengthened while the lower curve of p, s and h changed into an angular form. The letters
used in the minor rock inscription at Udayagiri hill became more angularised in comparison to the Hathigumpha inscription of Kharavela. The letters such as k, kh, g, ch, chh, t, th, d, n, p, b, n, y, r, l, v and s are found to be similar in form with the Nanaghat Inscription of queen Nayanika. The tendency of predilection for cursive forms in the 2nd and 1st century B.C. epigraphic records dictated by the swift flow of the hand.

The triangular head mark developed here. The letters used in this record reasonable those of the so-called Eastern variety of the Gupta-Brahmi alphabet. The letter n and h are almost developed as in the Allahabad pillar inscription of Samudragupta, k, n, and s show the pre-Gupta forms. In some cases the form of n is found in the Northern Gupta form of the 4th Century A.D.

From 4th Century A.D. to the 7th Century A.D.

From about the 4th Century A.D. onwards we have more and more epigraphic records incised both on metal and stone. The ruling families which had sway over the different parts of ancient Orissa claimed to belong the Vasishtha, Mathara and Pitrbhakta families. They ruled the region comprising Srikakulam, Visakhapatnam district in Andhra Pradesh and southern region of Ganjam and Gajapati districts. The system tended to become localized and affiliated to the various cultural regions in the sub-continent. The growing influence of the stylus in Southern India in the 5th - 6th Century A.D. resulted - the letters became more rounded and have waves on their arms and these waves were probably due to the nature of the palm leaf on which stylus was used.

The ruling families of Western Orissa such as the Nala, Sarabhapuriya and Panduvamsis used the so-called box-readed variety of the central Indian alphabet with southern peculiarities. The characters of their inscription evince the tendency towards elongation and angularisation in a considerable more accentuated manner. The equalization of all the verticals turning of all the curves into sharp angles and the contraction of the breadth impart a peculiar appearance of this alphabet. All the letters show box-heads except i, e, n, j, n, b, and l. The peculiarities of the southern alphabets are to be seen in a stereo typed manner in the left ward curves at the bottom of the initials, a,a and the consonants k, n, and r. The solid square growing into abroad rectangle and this head mark is placed centrally over the verticals. In some cases the small horizontal bar added in the left top of the letter as seen in a, k and t of the purle plate of Indravarman. The copper plates of the early Gangas of Kalinganagara show a fundamental difference from the style of writing seen in the earlier groups. Their inscriptions reveal borrowings from the proto-Kannadi scripts or the Rastrakutas. The Canarese influence is seen in the letter t, ch, n, th, d, dh, n and bh.

The use of different type of tools for writing had a marked influence on the letters of Northern Orissa. The use of pen throughout Northern India gave a definite head mark for the letters. From the 5th Century A.D. onwards the pen leaves behind a blot at the foot of the verticals which shows the new forms of the letters as exhibited in the records of the Vigrahas, Dattas, Mudgalas as well as Naga families of Northern Orissa. Though the regional styles might have differentiated but the use of common language Sanskrit help for the easy movement of literates and scribes from one region to another. Although later kingdoms had to adopt uniform style of writing within their jurisdiction but some similarity are also marked.

From 7th to 10th Century A.D.

From the last quarter of the 6th century A.D., another tendency is marked in the Sailodbhava record of Northern Orissa. The chief characteristic of their letters is that the right vertical limbs of the letter became slightly bent inwards.
At the same instances because of this bending the vertical makes an acute angle with the base line, which show the acute angle at the lower ends. The top of the line or the vertical invariably bear small wedges and their end show some ornaments on the right. Their character of the whole group is called “acute angled”. Further the term “nail-headed”11 was frequently applied to them and possibly the Indian term “Siddhamatrika” and “Kutila”12 might have been used. From the first half of the 8th Century A.D. to the middle of the 10th Century A.D. the Bhaumakara are in Tosali rose into eminence. They follow the Sailodbhava formulae but the scripts are generally taken to be of the Eastern variety of Northern Indian alphabets. The common palaeographic peculiarity noticed is the confusion between v and b. The Nagari and Bengali form is also exhibited in the letter “U” of the Neulpur plate of Subhakaradeva13 and in some case the characters of bh, t, tt, and h is very difficult to distinguish.

However the Svetaka Ganga as ruled over the northern part of Ganjam district of the time when the Sailodbhava were in power. Their records are found not only from Dhenkanal and undivided Ganjam district of Orissa but also from Srikakulam district of Andhra Pradesh. Their inscriptions show fundamental differences from the style of writing seen in the earlier periods. Their square headed letters betray some influence from the Northern Deccan and their inscriptions reveal borrowings from the proto-Nagari and proto-Kannadi scripts of the Rastrakutas. However the northern variety showing signs of southern features as seen is the Gautami plates of Ganga Indravarman.14 The admixture of northern and southern types is found in the Vishamagiri plates of Indravarman while the complete northern variation is found in the Svalpa-velura grant of Ganga Anantavarman.15 The proto-Nagari influence is seen in the form of initial i with two dots above and a line below, the looped form of k, the open mouthed n and t with its arms meeting in a top curve. The proto-Kannadi influences is detected in the peculiar form of 9 in which the lower half of its right vertical is doubled and the left hook in assimilated to the loop on this side. Though the letters from the 7th-10th Century A.D. show the regional difference on northern and southern but in some instances their co-relation in also observed.

From 10th to 14th Century A.D

The palaeography of Orissan inscriptions from the 10th to the 14th Century A.D. shows all round development of Nagari, Gaudiya and Proto-Oriya characters. The north and central parts of Orissa were ruled by a series of Kings of the Bhanja dynasty. From the available copper plate inscriptions of this dynasty it is known that Mayurbhanj, Keonjhar, Angul, Baud, Daspalla, Sonepur and Ghumuser regions of Orissa comprised the dominions of the Bhanjas. The Kalinga script influenced by the Northern alphabet is seen in the Russelkonda plates of Nettabhanjadeva.16

The eastern variety of Northern alphabet is altogether used in the plates of Silabhanja Tribhuvanakallasa.17 The proto-Oriya style was developed in the Bhanja records of the 12th -13th C. A.D. In the Adipur copper plate grant of Durjayabhanja Deva18 the Oriya characters were in the process of assuming their present forms. This is evident from the form of t, th, p, pt and shth and t which definitely look like the modern Oriya characters. Besides the development of this character the Bengali form is also observed.

In the 11th -12th Century A.D. large parts of Northern and Central Orissa was ruled over by the Somavamsis who seem to have displaced the Bhanjas of Khinjalimandala from their original territory. The character used in their records belong to the Nagari alphabet. It was from this script that the modern regional alphabets were used in Bihar, Bengal, Assam, Nepal and Orissa.
The script bears a close resemblance to their modern Nagari counterparts.

The period from 1076 A.D. to 1435 A.D., Orissa was ruled over by the imperial Gangas the records of which were not only found from Orissa but also from Visakhapatnam district of Andhra Pradesh. Although Nagari and Gaudiya alphabet predominated but in some instances the modern Bengali and Oriya forms are also adopted. In some other instances as in the Siddheswara temple inscription of Narasimha IV, the Oriya characters were also applied. So in the process of gradual modification of the alphabet in the Oriya inscriptions the early Oriya character developed.

In 15th and 16th Centuries A.D.

The Suryavamsi Gajapati, the successors of the imperial Ganga dynasty ruled from A.D. 1435 to A.D. 1568 for about a hundred years in Orissa. The copper plate and lithic records produced by them have been found not only in Orissa but also in Bengal and different districts of Andhra Pradesh and Tamilnadu. As a result, the letters are influenced both by the Southern characters as well as Bengali formation. So a mixture of Nagari, Telugu, Bengali and Oriya characters are developed and finally the letters assumed the roundish shape.

The proto-Oriya has been gradually transformed into the modern Oriya alphabet. The initial a, a, e, ai, au, k, kh, ch, gh, t, n, t, bh, r and s are found in proto-Bengali form. The influence of the Nagari is noticed in the case of letters such as a, a, k, g, gh, ch, j, t, th, t, th, d, dh, n, p, ph, b, y, sh which may be called the archaic or early transitional Oriya script. However it is reasonable to think that the Oriya letters have come down both from the influence of the Nagari, Bengali and southern alphabet.

References:
1. The Indian script running from the left to the right is an invention of Brahma. This is termed so as the same is initially and locally called as Brahma lipi.
2. CII. Vol.I., pp. 84-97 ft, and plates.
5. A.H. Dani, Indian Palaeography, Delhi, 1986, P. 57.
6. A number of short Brahmi inscriptions have survived in the Udayagiri hill due to the short nature in comparison to that of the Hathigumpha inscription.
8. CII., Vol. III, pp -6-10 ff and plate.
9. It is called box-headed because the top of the letters give the appearance of small square boxes which are formed by sinking of four short strokes in the form of a square.
10. From the last quarter of the 6th Century A.D. on the North Indian inscriptions, the right vertical makes an acute angle with the base line and Buhlers termed of “acute angle” alphabet.
11. The use of pen throughout Northern India from 5th Century A.D. marked a definite change of the head mark to the letters. It assumed the shape of a solid triangle called “wedge” or “nail headed”.
12. The name “Kutila” is probably given on account of the flourishing matras and the left word slant of the verticals of the letters.
17. Ibid, pp. 272-78, ff and plates.
19. It is also called Gauri which is said to have been used in Purvadesa or the Eastern India.

Dr. Harihar Routray is the Research Scholar in Epigraphy in Utkal University, Bhubaneswar