ORIGIN OF BRAHMI AND THE TIMELINE OF OTHER INDIAN SCRIPTS

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ABSTRACT

In this work the place and time where brahmi script started has been arrived at. The work also explains the rise of Magadh Empire out of other ancient kingdoms in India. This expansion was followed by the Mauryan Empire which came right after the Nandas Empire. The work also shows the importance of this script in the formation of Nandas empire and the Indians ability to stop Alexander's invasion into deep India i.e. Alexander's inability to repeat his defeat of Persian Empire.

1. INTRIDUCTION

Over long period of Indian history, many scripts were used due to the vastness of the Indian subcontinent and diversity of people [1,2]. Table 1 shows various periods in the ancient history of India. The important scripts that were used during the ancient times shown in this table are Indus script and the brahmi script although there have been many others such as shankha (conch) also. One can find very good discussions on the Indus as well as brahmi scripts in these two references.

In reference 2, the origin of brahmi has been discussed at great length but without obvious conclusion. There have been uncertainties amongst various people regarding use of any script prior to Ashoka's time even though the Nandas had vast empire with large military machinery to meet any challenge posed by Alexander who had very successfully won over vast territories from Greece to the western part of India.

It begs an answer to an important question – How could Nanda's maintain or hold vast territory without any script or writing system -who ruled Northern India prior to Ashoka? Did Panini in writing Aṣṭādhyāyī or Kautilya in Arthashahtra use a script while writing sophisticated books which have validity even to-day?

Regarding Panini or Kautilya Indians believe that in Indian tradition knowledge is passed down orally where those involved in this transfer were very high level intellectuals whose numbers were a very small fraction of the population.

The author believes that to maintain a vast empire, and complex military machine it is not possible to do so, without any kind of written and developed communication mechanisms. A few intellectuals cannot run a complex military machine or state administration stretched over vast areas. To match Alexander's army which defeated well developed Iranian forces, requires a very perfect system militarily.

The author had all along wondered at this ability of the Nandas. The answer to this question came surprisingly while researching on the origin of Kaithi script [3].

2. THE ORIGIN OF THE KAITHI SCRIPT AND PROLIFERATION OF SCRIPTS IN INDIA

The earliest brahmi script was discovered at Morva in the state of Bihar during the Mauryan times around 300 BC. After this, all of a sudden we find the edicts of Ashoka (272 BC – 232 BC) written in this script. These edicts are found all over India in Ashoka's kingdom which extended even into Afghanistan (see Fig. 1). Shankh (conch) script also existed along the side of brahmi for a long time until 10th century [3,4].

The brahmi script was used in the entire Mauryan Empire which began in 4th century BC and it extended over vast areas as shown in Fig. 1. It, brahmi, continued to be used until the end of the Gupta Empire the end of which took place in the 7th century (see Fig. 2). This Gupta Empire was smaller than the Mauryan Empire yet it extended over vast areas of India (Central and North). Gupta Period was followed by Pala Period in the East India between 7th to 12th centuries AD.

As Gupta Empire ended in the 7th century, there did not exist large kingdoms in India for example, the Pala Empire was confined to East India only.as shown in Fig. 3 [4,5].

Due to the breaking up of India into smaller kingdoms – no central authority remained to govern entire India with the result the communication between different areas became difficult. This possibly led to coming up of new scripts in their respective regions. Fig. 4 shows the extent of Nanda Empire which just preceded the Mauryan Empire and this empire was a deterrent to the advance of Alexander the Great. Alexander returned back without entering its boundaries - along the Indus River.

Fig. 5 shows emergence of a script during the time of Dharmpala. Fig. 6 shows the highways in India which connected the Persian ruled Takshashila (also written as Taxila) with the capital of Magadh at the time of Bimbisar . The Nandas ruled from Pataliputra. Fig. 7 shows the extension of Persian rule into India shown as the shaded area to the west of Indus River. Fig. 8 shows the timeline of the evolution of various scripts in different regions of India [3]. As an example, Figs 5, show

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newer (non-brahmi) script during the Pala Dynasty which is being referred to as a general group of Kutil in [6,7]. One can read more ancient inscriptions in [2,3].

Das has written more details about the Kaithi script and its uses in modern times [8]. When the Gupta Era ended, newer scripts arose due to the daily necessities. These scripts are called Kutil script which gave rise to various scripts in different regions of India in the later period. One of these scripts is Kaithi which was used for taxation, and other matters in the courts. Similarly, Mahajani was used amongst the traders.

From the discussions above, one can see firstly that, (a) new scripts take time to develop, (b) they are not that easy to develop, and (c) they develop as a necessity to carry out day to day work such as Kaithi or Mahajani. In other words, when the use of any script is known to a society, then, when the central authority ceases to exist like the Gupta Empire, new scripts are evolved to carry out day to day life.

Secondly, to maintain an empire it is essential to have a script otherwise the communications between the administrators will fail. Likewise, to defend the country, a large military force needs scripts to carry out orders and for strategy planning. For communications, one also needs roads and highways for faster movement of administrators and military to guard the borders.

As compared to other countries which had empires such as Persia, Egypt, Hittite's etc, India had the first empire ruled under the Nandas much later than the other countries mentioned here. This was clearly due to a lack of written communications in the state matters.

3, THE PERSIAN RULE OVER NORTH WEST INDIA

Persian Empire existed between 550 BC to 330 BC. Their empire extended between Greece to Indus in India. Cyrus invaded India in 533 BC when India was divided amongst various small kingdoms.

Darius divided the empire into provinces called satrapies, each of which was governed by a satrap. He connected the empire by roads and had a common

currency throughout. The Persians invented the concept of the mail which was delivered from one end of the empire to the other.

In 330 BC, Darius III died after being defeated by Alexander who invaded western part of India in 323 BC when the Nandas ruled India. Alexander did not attack the Nandas as they had vast army [9-13].

Takshashila was in the Persian Empire and the people west of Indus lived through the Persian administration which had a writing system.

So, just like the end of Gupta Empire, newer scripts were developed at Takshashila which also had a university where Panini lived. The rest of India was connected to Takshashila through highways along which people travelled from rest of India (see Fig. 6).

Kautilya also known as Chanakya was a professor at Takshashila and he lived during Nanda and Mauryan empire days. It is quite obvious that Chanakya learnt new script (brahmi) at Takshashila. With time. This script was used throughout India and Sri Lanka.

In India, after the decline of Gupta Empire when new scripts came into existence, they started being used. Tamilnadu was not ruled under Ashoka's empire, so, in later periods newer scripts were not evolved and it stayed with old brahmi script. On the other hand, Sri Lanka had interactions with Ashoka in Magadh, so culturally, it became different from Tamilnadu. Therefore, due to these interactions, they developed new Sinhalese script.

Regarding the influence of Persian Empire in India, especially with Magadha, Spooner's excavations revealed the famous Mauryan 72 Pillar Hall at Pataliputra as expressed by an author is an extension of the Iranian influence (" the influence of Persipolitan architecture on Indian architecture which is seen in more than one place.") [14, 15] . It must be clarified here that what is meant here is influence which is not necessarily an exact replica of Iranian Persipolitan architecture.

4.   EARLIEST SANSKRIT LITERATURE

The Ashtadhyayi is one of the earliest known grammars of Sanskrit, although Pāṇini (5th Century BC at Takshashila) who has referred to previous texts like the Unadisutra, Dhatupatha, and Ganapatha also .[14]. It is the earliest known work on linguistic description, and together with the work of his immediate predecessors who were the Niruktas, Nighantus, and Pratishakyas - stands at the beginning of the history of linguistics itself.

His theory of morphological analysis was more advanced than any equivalent Western theory before the mid-20th century. Besides, his analysis of noun compounds still forms the basis of modern linguistic theories of compounding.

Similarly, Kautilya who lived during the 4th to 3rd Century BC , authored the Arthashashtra [16]. The Arthashastra is an ancient Indian treatise on statecraft, economic policy and military strategy. Kautilya, the mentor of Chandragupta Maurya lived between 350–283 BC. He was a professor at the Takshashila University. As far as any writing system such as scripts are concerned, none have been found anywhere in India earlier than Ashoka's inscriptions in brahmi.

The question is : How can books like Arthshashtra or Panini's grammar can be passed on or even created without a writing system? Many argue that the Indians had oral traditions where the information was passed on from the teacher to taught.

Such arguments can hold only for a very small and selected group of people who spent their lives in religious matters. It cannot apply to a society which had lived through the Persian rule who had seen, for its time, modern means such as postal system, sophisticated administration etc. The teacher – taught or guru- shishya concept cannot be applied to the large masses. Hence, the society must have developed a writing system even in the Panini's days as was done with Mahajani or Kaithi after the decline of the Gupta period.

Absence of a writing system cannot explain the existence of the Nandas Empire against whom even Alexander who won between Greece to western part of India – did not invade due to its sophisticated and large army. Alexander could defeat Darius III in several battles where Darius was the emperor of very sophisticated or most sophisticated empire.

This leads to only conclusion that brahmi originated in the areas of Persian Rule in India where Takshashila lies in the 5th Century BC. For a script to develop, it takes time as it did during the post Gupta Period.

With Ashoka's vast empire and due to travels between Takshashila to Magadh or Takshashila to south through the Dakshiapath – the use of brahmi spread to South India up to Sri Lanka.

In later periods, other scripts were developed such as Telugu etc but Tamilnadu stuck with older form of brahmi whereas other scripts super-imposed the earlier brahmi which was used throughout India and Sri Lanka.

To show that brahmi script was not used before the Persian contact, the author has seen the ancient remains at Vaishali including its museum where only stamped coins without any inscriptions were found. This limits the earliest time to Ajatshatru (son of Bimbisar) period when the Vaishali residents were not using any script.

This way, one can pin point the time and origin of brahmi in India to the Persian ruled Takshashila.

The knowledge of brahmi by Panini and Kautilya was within a limited group of people, the intellectuals who were educated. On the larger scale, it was adopted by the Nandas who expanded their empire very rapidly between 345 to 322 BC. Then Chandragupta Maurya took over the empire and he also expanded it rapidly until 298 BC when Bindusara became the king. There was little expansion during Bindusara's time but when Ashoka took over in 269 BC – he attacked Kalinga. After seeing the bloodshed, he converted into Buddhism and spread his messages of peace through his edicts and cave inscriptions.

In other words, it was Ashoka who utilized the state machinery or the state resources to spread the use of brahmi. When state machinery is used then things expand at a very rapid rate.

Similar thing happened when Constantine at Constantinople (Istanbul) adopted Christianity and used state machinery to spread Christianity.

5. CONCLUSIONS

In this work, the ancient history of India was reviewed where new information about very little known scholar's life (Panini's) was looked into. His contribution to linguistics and grammar were highlighted. It was also brought out that he was the first amongst the Indians who could have used brahmi script having lived in the area ruled by the Persians who had a writing system. This led to the conclusion that the origin of evasive brahmi was at Takshashila and its use was made by others like Nandas and Chanakya, later on.

One can also conclude that the rise of first Indian Empire by Nandas was due to the use of brahmi which assisted the government in maintaining a vast army which deterred Alexander from Invading major part of India.

Ashoka was the first king to use the brahmi on a large scale and in public domain to spread his messages and expand Buddhism.

Finally, the decline of the Gupta Period and resulting decline in the use of brahmi gave rise to many other scripts in India and South East Asia.

6. REFERENCES

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https://en.wikipedia.org/wiki/Arthashastra

TABLE 1 IMPORTANT DATES / PERIODS OF INDIAN HISTORY

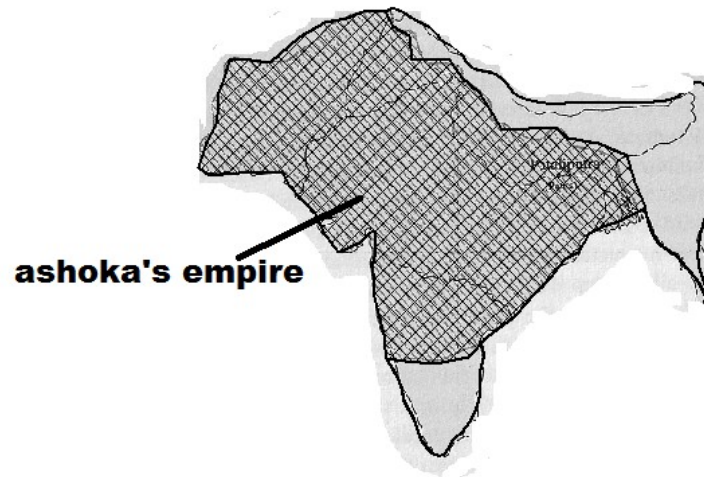| CULTURE	PERIOD (BC)
Pala Dynasty	7th – 12th Century **AD**
Kanishka	78 **AD**
Ashoka	269 - 232
Nanda Dynasty	345 – 321
Bimbisar	560
Gautam Buddha	563 -483
Beginning of Written History of India	Bimbisar's Period
Iron Age	1100
Post Harappan	1400 - 1100
Late Harappan	1900 – 1400
Intermediate Harappan	2300 - 1900
Early Harappan	2500 - 2300
Transition	2600 - 2500
Pre Harappan	3500 - 2600

FIG. 1 ASHOKA'S EMPIRE

FIG. 2   GUPTA EMPIRE

FIG. 3 MAP OF PALA DYNASTY RULE

FIG. 4 THE NANDA EMPIRE

FIG 5 INSCRIPTION DURING DHARMAPALDEVA

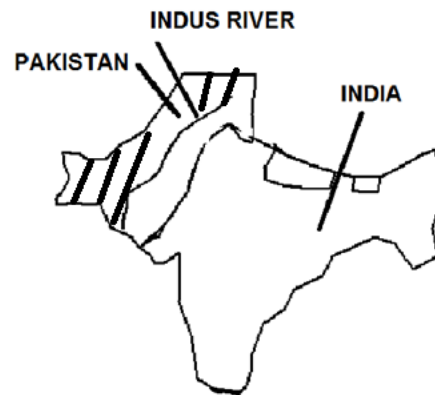**FIG. 6 THE UTTARA AND DAKSHIN PATHS**
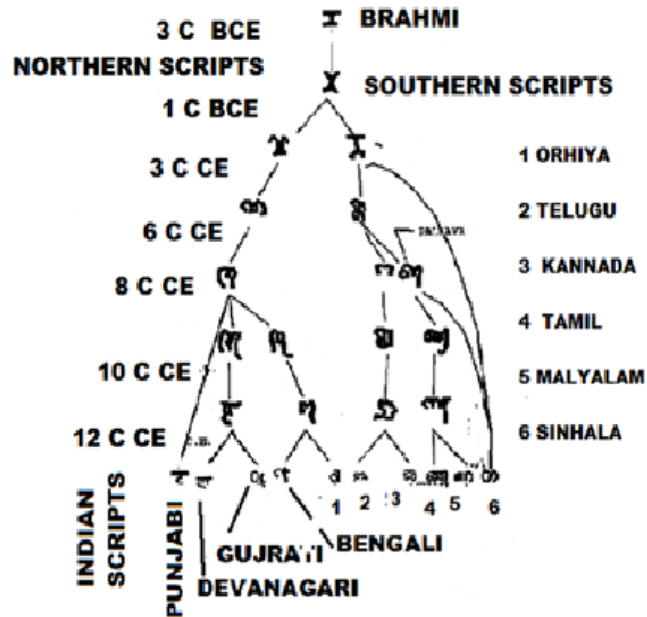
FIG. 7 PERSIAN RULE EXTENDED TO THE WEST OF INDUS RIVER

FIG.8 TIMELINE OF VARIOUS INDIAN SCRIPTS