

Barter system, Vedic rituals and their role in the introduction of metallic currency in Indo-Pakistan

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The origin of Indian coinage is still shrouded in mystery. It is still a question mark whether it was indigenous art or it was adapted from other civilizations. However, it is clear that before the coins, the common means of payment was some kind of medium of exchange or barter system (Brown, 1922: p.1; Gupta, 1992: p.4). To trace back that what kind of currencies were in circulation after barter system and before Punch-marked coins. We have to solely depend on the Vedic, Buddhist and Sanskrit literature, because the approximate date of the Vedas and other literatures are determined. Unlike Punch-marked coins, these metallic currencies have never been reported from any site of Indo-Pakistan. So, to get an accurate result, we will divide these books according to their period of composition i.e. Early Vedic period, post Vedic literatures, Buddhist accounts and Sanskrit texts. We will respectively study the references made in these books that what kind of medium of exchange prevailed in that time and how people carried out their trade and commerce. Thus, we will easily determine the approximate date of any currency or other material which was used as a medium of exchange during Vedic and post Vedic period. We will apply this method throughout the time periods till we enter a phase, when we have the archaeological sources to justify our claims.

It is certain that the barter system has been in existence in one form or another in every stages of human civilization except in the early stage of the Paleolithic era (Prasad, 1977:p. 156; Gupta, 1992, p. 4). In India the traces of barter system have been discovered from Singrauli a micro lithic factory site. On the basis of the above mentioned discovery, hypotheses are being made that in the late Stone Age the hunters might have exchanged stone-tools for other goods, with the Neolithic settlers. They might have exchanged their stone tools with baskets, honey etc. but this must have occurred in the very late stage of the Neolithic era (Ibid, 1992, p 6; Ibid, 1977, p 156). In the beginning, as we have already discussed above, the items of exchange were mainly

food. One step forward in the pastoral-stage animals and in the agricultural stage a number of agricultural products were taken as a medium of exchange.

The barter system continued to exist by the inhabitants of the Indus valley civilization (ibid, 1977,p 156). During the course of excavation in two major sites of the Indus valley with the civilization of Harappa & Mohenjodaro, a large number of silver pieces and a big amount of weights have been reported. (Wheeler, 1968, p. 83; Quiggin, 1949, p. 190; Chopra et al. 2005,p. 18; Barr, 2003,p. 8).The mature phase of Indus valley civilization is dated back to 2500-1800 B.C. (Ibid, 1968,p. 5; Allchin & Bridget, 1982,p. 218-19; Chopra et al, 2005,p. 21- 50; Gupta, 2006,p. 6). It is certain that they must have used these weights for fair supply and distribution in trade and commerce. But it is really surprising that such a highly urbanized civilization with a great chain of trade with southern India, Afghanistan, Rajistan, and even with Mesopotamia were just dependent on the barter system (Upshur et al, 2011, p. 60; Gupta, 1999, p. 164; Chopra et al, 2005, p. 18; Kosambi, 1992, p. 88; Quiggin, 1956, p. 33; Quiggin, 1949,p. 190). As far as the silver pieces are concerned, they are fractions and multiples of a certain unit but there is no evidence to prove that these were used for purchasing purposes (Quiggin, 1949, p. 190). But what about the ring stones, reported in a large number from both sides. Some scholars suggest that these might be the form of a currency. They compare these ring stones with the wheel money of Uap (Yap) (ibid, 1949,p. 190). In connection with this, Marshall makes rational comments that the wheel money of Uap (Yap) presents a striking parallel to the large class of ring stones in the Indus valley. But he further argues that it is unacceptable for such highly civilized people with trade links with Persia and Mesopotamia to use so cumbrous forms of currency. He makes its relation with the magical properties that all holed stones are believed to possess (Marshall, 1931,p. I, 610; Ibid, 1949, p. 190).

Though there is no clear evidence to claim what sort of system was used by the Indus people besides bartering, there is no doubt to claim that till 1500 B.C. Indians were not aware of any kind of metallic currency. But it is clear that Indians were skilled in the weighing and measuring system much before the Aryan invasion and the composition of the Vedic books. It is also suggestive that the Vedic peoples might have inherited this

knowledge from Indus people and later they used this art for different purposes including weighing their metallic currency.

After the decline of the Indus valley civilization we enter into a phase which is known as the Vedic age in the Indian history. Generally dated, between 1500-600 B.C. as most of the modern scholars agree on this date (Shayegan, 1992,p 40; Varghese, 2008,p. 15-16 Ganguly, 1984,p. 131; Sharma, 2004,p. 17; Crawford, 1995,p 169; Fraser, 1990,p. 41; Larson, 1995,p. 53; Markham, 2000,p.116). Generally, the scholars divide the Indian philosophy into three flowing periods.

- i. The Vedic period (1500-600B.C), composition of the four Vedas, Upanishadas.
- ii. The Epic period (600 B.C-200 A.D).
- iii. The flourishing period (200 A.D. onwards) (Veereshwar, 2002, p.204)

To fully understand what sort of currency was in circulation in Vedic and post Vedic periods till the introduction of proper coins know as Punch-marked, we will divide the Indian philosophy in the following periods.

1. Vedic period (1500-600 B.C). In this period we will observe the references about the barter system and other metallic currency mentioned in all four Vedas and some other literary accounts.
2. Our post Vedic period will be comprised of Hindu epics, Buddhist literature (jatak stories) and Panini sutra. All these books were written between 600-300B.C.

In the Vedic Age, the cow stood as a higher unit of barter and cowrie-shells were used for lower purchase (Hoggson, 1926,p. 28; Paliwal, 2006,p. 172; Pillai, 1988,p. 100).It is evident from Vedic texts, that during the Vedic sacrifices, cows were offered to the Brahmins as a gift. We have a number of references about purchases by offering cows. A Rishi in a bargain with another Rishi refused to exchange his golden *Indra* even at the price of 10,000 cows (Prasad, 1977, p. 157). The Trading class in Vedic period was called *pani*, originating from the word *pan* which means barter. Similarly, the terms *prapana* and *pratipana* are used in the sense of barter (Gupta, 1992,p. 7). The exchange of gifts was a common practice among Vedic peoples. It is mentioned that the sacrificial

food was offered to *Indra* and *Varuna* with the hope to gain wealth and other forms of happiness. With this instance we can notice the secular aspect of the sacrifice to offer a gift to a god or a goddess to get back some worldly benefits. There are references in Vedas of an institution of sacrifices as means of material exchange between the priests and the ruling Aryans (Bandyopadhyaya, 2007, p. 25-26). These gifts or sacrificial fees played an important role in the prevalence of metallic currency and later in the development of coinage in India. In the beginning it might have been just a gift to make the *Guru*, god& goddess happy and to get back some worldly benefits. These gifts were termed as *Dakshina* (Sacrificial fee) in Vedas (Muller, 1899, p.357; Bloomfield, 1908, p. 69; Bandyopadhyaya, 2007,p. 27; Sharma, 1976,p. 80; Pruthi, 2004,p. 178; Lochtefeld, 2002,p 166; Veereshwar, 2002,p. 134; Barton, 1917,p. 50). If fees were paid by a king then that must be a precious gift in the shape of a gold necklace etc. it is also evident that lower castes were also presenting gifts and *dakshina* to Brahmins (Bendix, 1977, p. 191; Ghurye, 2008,p. 60) Here, we can make a natural assumption that it is almost impossible for a common person to pay a gold necklace as a fee or gift or for a Brahman to exchange his *Dakshina* for food stuff. The poor community might divide the necklace into equal parts to present them as a gift and the Brahmins may have also used the same method to buy goods for everyday life. Later on, they not only started to use these gold ingots (separated from the necklace) as a fee for services but also to buy and sell the things. These gold necklaces or ingots were known as *nishka* in the Vedic literature (Vaidya, 2001, p. 223; Muller, 1860,p. 332; Pillai, 1988, 48; Kumari, 1997,p. 85; Hoggson, 1926,p 28; Paliwal, 2006,p. 172).We have a number of examples in Vedic and post Vedic literatures that gold ornamented cow were presented as *Dakshina*, horns tied with gold globule and such kind of sacrifices or donations were called *Gau Sahasra Daan*(Agarwal, 2010,p. 113). In one instance the king of *Videha*, named *Janaka* made a sacrifice and a number of scholars were invited from *Puru* and *Panchala*. Seeing such a large assembly of scholars the king showed his desire to arrange a competition among scholars to know the best scholars. The king also announced that the winner would be awarded with a thousand young cows. On the horns of each cow ten gold globules were fixed, five on each horn (Aggarwal, 2003, p.127; Bandyopadhyaya, 2007, p. 68). Here, in the verse these globules might have been *Nishka or padas*. It indicates that the king had already them in his treasure otherwise it would be almost impossible to prepare gold

ingots in such large numbers, in the spur of the moment. These gold pieces must have been of uniform weight, as I have mentioned above, otherwise a variation in the weight would have been a cause of injustice. This might be the oldest example of offering metallic pieces as a means of exchange. This example clearly indicates how the Vedic people commenced to use precious metal as currency, which finally led them to invent coins. Thus, we have not only references of *Nishka* but also some other terms have been used for metallic ingots with a uniform weight in the Vedic, post Vedic time as well as in other classical ancient Indian literatures. These were certainly used for trading purposes but we cannot term them as coins. This was the period when trading activities expanded to far flung areas, population increased, demands and productions increased and barter system started gaining failure and the Indians commenced to bargain through metals. The Barter system is only applicable when the trade is simple and limited and when both consumers and suppliers know each other's needs. These and some other difficulties might be the causes for the introduction of universal means like metallic pieces. Interestingly enough, it is noteworthy that a Sanskrit word *pacu* and the similar Latin word *pacus* or *pecunia* having the meaning of cattle, were and still are used to denote money (in Sanskrit *dhana*) (Hoggson, 1926, p.27-8; Barber,2004,p. 75; Leopold,1999,p.155; Muller,1848, p.263; Anderyev, 2005,p. 60; Forlong, 2008,p. 89; Benfey, 1998,p. 535). The use of the present day English word *pecuniary* (i. e. related to money) is reminiscent of the early transaction of barter system.

The art of coining was still immature in this phase of Indian history and we have examples of barter system even in the post Vedic and Buddhist literature. In the post Vedic period the authentic source is Panini work, where we can find in detail about the commerce and the rules and regulations of barter system. *Niman* is the word he used for barter and literary which means exchange of goods by agreement (Prasad, 1977, p. 157; Gupta, 1992,p. 7). The things to be sold were called *nimana* and the things to be bought were called *niemeya* (Ibid, 1992, p. 7). These terms indicate the development of metallic currency along with the barter system.

The *jataka* stories are the other important source; we have a number of examples of barter system though metallic currency which was also in circulation during this period. In one *jataka*, it is mentioned that 500 wagons were exchanged by a man with the

commodities of corresponding values (Prasad, 1977, p. 157). Rice, slaves and other grains are referred in *jataka* stories as the main commodities for bartering. In one *jataka* a man is shown while buying a god with a cloak. In another place a man bought a meal for a gold pin (Gupta, 1992, p. 10; Aquique, 1974, p. 166). In *Anatannu-Jataka* there is reference to a border town merchant, who ordered his agent to barter five hundred cart-loads with the local products (Ibidi, 1974, p. 166). This was the time when the barter system was replaced by the metallic currency; as it has been proved by different *jatakas* and the law-books ascribed to *Gautama* and *Vasishtha*. We have references that in certain cases for the *Sangha* the use of metallic money was forbidden. So in these cases, the things were bartered (Rapson, 1922, p. 217). This could be one of the reasons for the existence of the barter system even when the metallic currency was well established. The process of replacing barter with metallic currency was quite slow and we cannot demark the boundary when the barter system disappears and the metallic currency comes into circulation. The roots of the barter system can be traced till the very late periods even we can still find it in the far-flung areas of Indo-Pakistan.

Metallic currencies during Vedic and post Vedic period

After the above discussion we can conclude that before the Vedic age (1500B.C) the Indians carried their trade using the barter system while in the Vedic period (1500 to 600 B.C) they learned the use of metallic ingots as currency. Up till now we have just focused on the importance of barter system and *Dakshina* in the history of Indian coinage. Further on, we will only discuss in detail what sort of metallic currencies were in circulation during Vedic and post Vedic period.

Vedic Period (1500-600B.C).

The Vedic literature is the major and earliest source of the Indian coinage, which clearly illustrates that during the Vedic period, the Indians were aware of the usage of metallic ingots as a means of payment besides the barter system. In this regard, *Nishka* is the first worth mentioning name recorded constantly, in the Vedic and post Vedic literature. (Muller, 1860, p.332; Vaux, 1864, p.120; Pillai, 1998, 48). The word *Nishka* means gold or pure as gold. In the Encyclopaedia of Hinduism, *Nishka* is explained as a fixed quantity of gold not a coin (Encyclopaedia of Hinduism, 2000, p. 16). According to

Bhandarkar the *nishka* is called in *kalpa Sutra*, as *urattha-dinara-malaya* (a string of Dinaras on the breast) (Bhandarkar, 1921, p. 67). Krishna Murthy defined *Nishka* as a gold necklace mentioned in Rig-Veda and also in the later literature (Murthy, 1930, p. 80).

The term *Nishka* is a controversial matter among scholars. Most of the scholars are still confused whether *Nishka* was used as a neck ornament or as currency. In this regard, we have two different schools of thoughts, who presented a different meaning and usage of *Nishka*. The first group of scholars, who mentioned *Nishka* as a neck ornament, in which square or round pieces of gold with uniform weight were woven, believe that such kind of neck ornaments were used as a medium of exchange or for donation purposes (Kumar, 2008, p. 360; Bhattacharyya, 1995, p. 60; Paliwal, 2006, p. 172). The second group clearly claim that *Nishka* was a gold coin during the Vedic period (Vaidya, 2001, p. 223; Pillai, 1988, p. 100). Due to lack of archaeological evidence, all of them failed to present a satisfactory answer. Supposing that we tend to agree with the second group of scholars, who claim that *Nishka* was a gold coin, as they supported their claims referring to the Rig Veda, which is considered the earliest holy book in the Vedic series. If we also consider *Nishka* as a proper coin then all our problems will get solved. India would get credit of having the earliest coinage of the world and there would be no question of foreign and local origin theories of Indian coinage.

There is evidence in Vedas where *Nishka* is mentioned as neck ornaments with other jewellerys, like Kana sobhana Kumba(ear ornament), Khadi(anklet), and nishka(necklace) As it is proved that different kind of ornaments were used by the Vedic people, the ornament is called *Abharana* in Sanskrit, and the literal meaning is *Abha* being light, a flash or beautiful appearance. (Bhattacharyya: 1995:60; Pillai, 1988, p.114; Kumari, 1997, p.85). *Nishka* is also referred as a necklace in Ramayana (Sharma, 1971, p. 250). But if we accept that *Nishka* was just a necklace it would be totally unfair with this topic, because, in the *Atharvaveda* the word *Nishka* is used in the sense of an element which was used for purchasing purposes (Bhattacharyya, 1995, p.60). Besides, we have also references in Vedas that indicate the uniform weight and the use of *Nishka* as currency. In most of the cases the numerical usages of *nishka* compel us to think that it might be the very initial stage of transition from the barter system to coinage rather than

mere gold necklaces. The distributions of gold necklaces in such large numbers also seem startling. As the following example in some hymns of Vedas show how a Rishi, *Kakshivata* confesses to having 100 *Nishkas*, 100 vigorous steeds and 100 bulls from a mundane prince from the Indus region (Vaux, 1864, p. 120). Donating necklaces in such a large number is doubtful because 100 *niskha* can't be used for a personal ornamentation that must be in a shape of a small ingot of gold ingots like coins. There is also a contemporary example in Egypt that the copper anklets or bracelets were used by the Seventeenth Dynasty (1600 B.C) as a medium of exchange (Hoggson, 1926, p. 29).

As even in modern days the inhabitants of North Pakistan present a neck ornament studded with paper currency on any special occasion like marriages etc. Even in the early 20th century, it was a common tradition among Pushtun tribal women to ornament their dresses particularly around the neck and breast with coins. So it is not really astonishing that during the Vedic period they had the tradition to donate or present necklaces studded with gold ingots. Uniform weight and size might be a part to enhance its beauty. It may be more precise to assume that *Nishka* was a neck ornament not a proper coin and later on they started using it as a medium of exchange. Because of its value and uniformity in weight, it might have been easy for them to fix the value of an item more conveniently comparing it with the barter system. There is also probability that they might have used each gold ingot separately in a sense of currency which was studded in the gold necklace. But there is no doubt that *Nishka* was not a coin because it can't fulfil the requirements of a proper coin.

So far, we have been discussing the early Vedic period, let's have a glance at what sort of metallic currencies were mentioned in the late Vedic period. We should, therefore, go to the *Upanishads*, the only name occurred in this book is *Nishka*. If we precisely interpret the passages of this book, the term *nishka* is signifying necklace not a coin (Bhandarkar, 1921, p. 56). *Satamanas* is the other worth mentioning name which occurred in the Brahmanas. In the *Satapatha-Brahmana*, the Kanda dealing with the *Rajasuya*, in one section which treats of the *Rathavimochniya* oblations. Here, we learned that behind the right hind-wheel of the cart-stand the king fastens two round *Satamanas*, which were the fees of the Brahman priests for the ceremony. In another place, in the same Brahmana, there has been mentioned that three *Satamanas* are the sacrificial fees.

As in the first instance, it was *vritta* or round in shape. It is assumed that it might be a coin money and not mere a bullion (Ibid, 1921, p. 57).

I will quote a passage from the *Satapatha-Brahmana*, as quoted by Bhandarkar. The first passage is:

Suvarnam hiranyam bhavati rupasy=ev=avaruddhyai Satamnam bhavati satayur=vai purushah. The second is: hiranyam dakshina Suvarnam Satamanam tasy=oktam (Ibid, 1921,p. 57).

In the above stated passages a new term *Suvrana* appeared, which is associated with *Satamana*, and for both the word *hiranya* (gold) is used. It indicates that both were made of gold. In the above passage we can easily distinguish that *hiranya* means gold while *satamana* and *Suvrana* were the names of the currency made of gold. *Statamana* is also traceable in the *Taittiriya-Samihita* of the Black Yajur-Veda (Ibid, 1921, p. 58).

Padas is the other worth mentioning term which we came across in the fourteenth *Kanda* of the *Satapatha-Brahmana*. We are told that the king of *Videha* arranged a competition during a sacrificial ceremony among the Brahmans of the *Kuru-Panchala* country. It is said that the one who would be the best reader would be the winner. He collected a thousand cows and every single horn of each cow was decorated with ten *padas*, and it was proclaimed that these would be the award for the winner (Aggarwal, 2003, p. 127; Bandyopadhyaya, 2007, p. 68; Ibid, 1921,p. 60). We are not concerned about the rest part of the story. What we are concerned about is to know what these *padas* were?

Dr. Bhandarkar presented a natural assumption that as the cows were 1000 in number and each cow has two horns and as each horn carried ten *padas*, king Janaka ordered 20,000 pieces of gold to be hammered out. Each again weighing just one-fourth of a certain weight, all this just on the spur of the moment, when the idea of testing the erudition of the Brahmans occurred to him. According to him *parda* was a coin and *pada* is also referred as a coin in panini's sutras. To strengthen his claim he assumed that just as the modern denomination *pavla* or *pavli* which is derived from the word *pada* denotes four *annas*, like one –fourth of the standard coin, viz. the rupee. He further

claimed that *pada* was a coin; it is easy for us to understand that *Janaka* had 20, 0000 coins in his treasure for being tied to the horns of the cows (ibid, 1921, p. 59-60). As we are discussing the coinage of the late Vedic period and we noted the earliest reference of *pada* in *Satapatha-Brahmana*. *Satapatha* was composed between 8th to 6th centuries B.C (Nag & Sengupta, 2008, p. 1). We have already discussed both the early and late Vedic period in detail and we could not present even a single example of standard coin except metallic currency in the form of necklaces and gold ingots. If we accept Dr. Bhandarkar claim and consider *pada* as a coin then we have to accept all the metallic currency as a coin mentioned in the early Vedic literature. Because the story we are told by the *Satapatha-Brahmana* is not different from the tales of the early Vedic books we don't have any concrete evidence to prove that they were proper coins but to make some natural assumptions.

Krishnala is the other important name which we could trace in one of the passages of the *Taittiriya-Brahmana*: *Krishnalam krishnalam Vajasridbhayah prauachchhati*, i.e. he gives a *krishnala* to each racer (Ibid, 1921, p.60). But this passage may not be enough to prove the use of *Krishnala*. But there is no doubt that *krishnala* was the unit of Indian weight which is still used by the modern goldsmiths of India. It signifies *gunja berry* or *raktika* and its weight was determined by A. Cunningham 1.8 grains on the basis of specimens collected from entire India (Cunningham, 1891, p. 44-45; Ibid, 1921, p. 60; Nath, 1999, p. 54; Pruthi, 2004, p. 139; Vaux et al, 1864, p. 50; Buhler, 2008, p. 158). These were the terms used for trade, commerce and metallic currencies in the Vedic age, to make a final conclusion we have to observe the economic situation in the Post Vedic period as well.

Sanskrit & Buddhist literature

In this regard, if we take up Panini's *Ashtadayayi* or *Panini Sutra*, which are not only useful to study Sanskrit grammar but also for the reconstruction of the social, religious and economic history of North-India in early 6th century B.C. Panini is the greatest name in the Indian Philology. He was born in *Salatura* the present Chuta Lahore in District Swabi in Pakistan. The date of Panini is quite uncertain but usually he is placed in 5th to 7th century B.C. (Ninan, 2008, p. 97; Datta, 2006, p. 1460; Kroeber, 1969, p. 218;

Winternitz, 1998,p. 462; Mecdonell, 1994,p. 13; Wilke& Moebus, 2011,p. 482; Renfrew, 1987,p. 178; Kumar, 2003,p. 79; Masica, 1993,p. 135; Peregrine& Ember, 2002,p. 392). In his contribution *Ashtadhyayi* in *adhyaya V* and *pada I*, he explained various economic terms like *tena kritain* i.e. ‘purchased with this price and *tad= archti*, i.e. ‘which deserves that’. All these terms throw light on the economic condition of India during Panini time and it shows they used currency to sell and buy things, as he mentioned the name of seven different sorts of currencies in his work. Among them *Nishka* and *karshapanas* are worth mentioning (Bahandarkar, 1921, p. 45I). Dr. Bahandarkar, as he claimed that if seven different types of metallic currency were prevalent in India about 600 B.C. the beginning of the art of coins making in this country must be placed earlier than 700 B.C.(ibid,1921,p. 45-6).

To further elaborate our discussion we have to take a glance at *Jataka*’s stories or pre-birth tales of Buddha which bring a general consensus of opinions among both eastern and western scholars. Though *jataka* stories are not the earliest composition of Buddhist literature, it is certain that they throw light on the social and political conditions prior to the rise of Buddhism, as the events narrated in these stories may belong to the sixth or seventh century B.C. (Bahandarkar, 1921, p. 46). Now if we compare both Panini’ Sutrās and the *jataka stories*, we will come to know that both illustrated the ancient India of almost the same time. Now let’s have a glance at what classes of currencies were prevalent when the *jataka stories* were composed and either the Vedic *Nishka* still existed or not. So far, we could only trace two *jatas* which we came across with the word *Nishka*.

In this regard, the *Kuhaka Jataka* narrates a wonderful story of an ascetic who visited a village and lived in a hermitage there. A *Kutumbika* or farmer of the village brought some 100 *Nishkas* in his hermitage and buried them there. Considering him as a pious and trustworthy person the former requested him to keep watching over his money. After the farmer had left, the ascetic buried his money somewhere else. The next day the ascetic took leave from the farmer but returned shortly to give back a straw which got stuck with his matted hair but which didn’t belong to him. A trader, who had camped in the vicinity, doubted this over manifestation of the honesty, who was actually

Bodhisattva. He warned the farmer and they caught the trader and made him to reveal the truth (ibid, 1921,p. 48).

The second *jataka* where we can find the word *Nishka*, is *Vessantara Jatak*, which illustrates the story of *Vessantara* the king of sibi, who had retired in a forest. He handed over his son and daughter to a Brahman called *Jujaka*. Naturally, the children were reluctant to go with him. So to calm them down, the king said to his son that if he wants to leave he has to give a thousand *Nishkas*. But your sister is very beautiful; if any person of low birth can pay this to Brahman then he will set her free, he would break her birth right. So if your sister wants to be free, she has to pay the Brahman a hundred male and a hundred female slaves together with 100 elephants, bulls and *Nishkas* and only a king can pay all this(ibid,1921,p.49).

Our third *Jataka*, “The Great being” narrates the story of a snake king called *Champeyya*, who let a snake charmer to catch him for his good. The snake charmer makes the snake a king to perform in a frontier village. On first day, he made some 1000 *Karshapanas*, which encouraged him to go to the capital-town, *Varanasi* for performance. During the performance, the wife of the snake king appeared and offered him a handsome ransom to release her husband, one of the numerous items of which was one hundred *Nishkas* (ibid, 1921, p.50). In this *jataka* two classes of coins are mentioned, *nishka* and *Karshapanas*. The first, as we know is the gold currency while the second could be the silver money of *Kasi*. Now a question arises in our mind whether *Niskha* was the only class of medium of exchange during *jataka* period or they were also acquainted with some other classes of metallic currency. In the *Bhuridatta jataka*, we came across several other names i.e. *hiranya*, *surarna*, *vastra* and *alamkara*. In this tale a snake charmer tamed a snake king, who was well versed in dancing. On the very first day, he performed in a village and the villager appreciated his dance so much that they poured him with *hiranya*, *surarna*, *vastra* and *alamakara* (ibid, 1921, p. 50-51). It is clear that *Vastra* and *alamkara* means garments and ornamentation. The word *vastra* means clothes or a piece of cloth, in Latin it is *vestis* and in Greek *εσθης* (Muller, 1867, p. 44; Lanman, 1884,p. 240; Muir, 1860,p. 20). In some *jatakas* it is frequently mentioned *kasika vastra* or *kasiyai*(kasi textiles with reference to exquisite fabric). It is said that they were worked with gold and the kings wore turbans of these gold fabric whereas the

royal elephants were caparisoned with gold trappings (Das, 1992, p. 11), while the etymological meaning of the term *alamakara* is decoration or ornament. It was also a term used in Sanskrit poetry which means those factors which enhance the beauty of poetry (Mukherjee: 199:12; Sarma: 1994:146; Bhattacharya: 2004:789). But what *hiranya* and *suvarna* signify? Literary both words mean gold while *hiranya* is some time associated with silver as well (Laman, 286, p. 1884:; Vaux, John & Frederic, 1864, p. 50). Due to unavailability of archaeological evidence, it is really confusing to make difference between *hiranya* and *suvarna* and no one has given any satisfactory answer to what the exact use of these elements was. In Ramayana, both *hiranya* and *suvarna* are referred as gold; for example *Bharata* offers *Hanumat* two thousands of *Suvarna* and a crore of *Hiranya*, *kusa* and *Lava* ask what we can do with *Suvarna* and *Hiranya* in the forest (Guruge, 1991, p. 103). As the numerical number of the *hiranya* and *suvarna* in the above quotation indicate that both were precious metals and could count individually and these were also useless in the jungle. It also signifies that it might be in uniform weight and size. There are also references, that *hiranya* was used for taxation. It was tax on the hoard of gold, agriculture and industrial products. (ibid, 1991, p. 104). Same in the *Arthasastra* refers to it as a branch of the kings revenue that *Hiranya* makes a king wealthy (Aquique, 1974,p. 64). It is highly unbelievable that a common person would be able to pay tax in the form of gold. As generally in India the agricultural taxes were paid in a shape of grain besides cash. But what about the other fields like trade and commerce etc., how would they pay their taxes? They must have used *Hiranya* to pay their taxes, as the above references show and it also supports that *hiranya* might be used in a sense of currency.

In Ramayana, it is narrated that *Ramachandra* distributed *trimsat-koti-hiranya*(thirty crores of *hiranya*). In another place it is mentioned that while sending *Satrughan* on an expedition, *Ramachandra* gave him one million (*niyuta*) of (*Suvarna hiranya*) (Bakshi,Gajran& Hari,2005,p.58) . Here *Suvarna* and *hiranya* are mentioned together, as I have already stated above that *Suvarna* means gold. So, here it means that *Ramachandra* gave him *hiranya* made of gold. It means that *Hiranya* could be either of gold or of silver. It was not a term just used for gold only. It might be the name of a currency that was in circulation that time. Is this enough to claim here that *hiranya* was a

coin? A number of scholars referred to *hiranya* as a proper coin. (Aquique, 1974, p. 64). D.R.Bhandarkar presented the same idea that it was gold or gold coins (Bhandarkar, 1921,p.51).If we compare *Nishka* with *Suvarna* and *Hiranya*, we will come to know that *Nishka* was mostly referred as a necklace woven with gold ingots of uniform weight and size, which was used as a donation, gift and for buying things. Similarly, *suvarana* and *hiranya* were also gold with uniform weight and size, used for the same purposes. The word *suvarana* is traced together with in *Mashaka Udaya-Jataka*(Bhandarkar, 1921,p.52). According to the tale, *Udayabhadra*, are brother and sister who later on became husband and wife. They were the king and queen of the *Kasi* kingdom. The king died and became *Sakra* in the Heaven of the Thirty-three (Tavatimsa-bhavana). Once, he came down to the mortal world to take trail of his wife with enormous wealth. He presented her a gold dish replete with *Suvaran-Mashakas*. The other reference regarding *Suvaran-Mashakas* is found in the *Samkhapala Jataka*. In this *jataka* Bodhisattva again appeared in the form of a snake and was captured by a team of eleven persons. A rich landowner passed by, and saw the Bodhisttva in great agony. He paid a great amount to release him from snake charmers, amongst which prominent mentioning is made of the *suvarna-Mashakas*. (Ibid, 1921, p.52). As it has already been made clear that *suvarna* was used for gold but what is *Mashkas*? *Masha* is a unit in Indian weight system for coins. It usually differs from weight as the coin is made of gold, silver or copper. *Masha* denotes the weight while *Mashaka* denotes a coin of this weight. So here *Suvarna-Mashakas* mean a gold coin which may be equal to one mash in weight, according to the standards of gold coinage (ibid, 1921, p.52-53). As in our first instance of *Udayabhadra jataka*, we are told that *Udhayabhadra* hold a plate in front of his wife filled with *Suvarna-Mashakas*. It indicates that these were all distinct pieces, and each one of them could be called a *Suvarna-Mashaka*.

As we are discussing the coinage of 6th or 7th century B.C and we could trace back three main types of gold uncoined currency so far. The lowest value was the *Mashaka*, *Suvarna* was of a little higher denomination while *Nishka* might be higher than the former two types. To proceed our discussion we should also have a look at the books which are contemporary to *jataka* stories or composed a bit earlier than *jataka* tales. In this regard, we have another reference of a metallic currency called *Satamana*,

mentioned in *Katyayana's Srauta-sutra*. Though we could not find the reference of this coin in *Jataka* tales, Panini's sutra contain this name. *Katayana's vartika*, indicating that *Satamana* was even used till the Mauryan period (ibid, 1921, p. 54-5). But all these three terms don't fulfill the requirements to claim them as coins. It would be more precise to claim that these might be uncoined gold ingots, which were used as a medium of exchange. But all the above evidence is enough to support the local original theory that coins developed natively in India. As, I have already mentioned above both Panini Sutra and *Jataka* stories are contemporary and portray the social, political and economic condition of the same period. In both pieces of work we can find the word *niskha* to exist in a sense of metallic currency etc. The existence of *Nishka* in Vedic, Brahmanic, Sanskrit and Buddhist literature state the centuries long journey of the development of Indian coinage. There is evidence that India had strong trade links with the outer world even before the Vedic age but till the end of the Vedic age we don't have any evidence to prove that India borrowed the art of money from any foreign nation.

So we can conclude that with by the time the integrity in offering pure and genuine metal pieces might have been under dispute because of adulterations of silver and copper in gold and copper in silver. This dispute was brought to an end by the rulers or by the trading authorities by punching marks of authenticity and thus initiated the minting of the coins. These punched coins are termed as Punch -marked coins by modern numismatists. Punch-marked coins are considered the earliest proper coins of Indian subcontinent. It is indeed an uphill task to assign a specific date of the commencement of Punch- marked coins. A. Cunningham asserted that Punch- marked coins were in circulation during the life of Buddha, that is, 6th century B.C. So, he claimed that Punch-marked coins may introduced much earlier about 1000 B.C. (Cunningham, 1891, p.43). While E.J.Rapson said that punch mark coins are not early than 4th century B.C. (Rapson, 1897, p. 2). V.A. Smith, in his Catalogue of Coin in the Indian Museum, Calcutta, he gives a later date to the earliest coinage of India, the earliest type of the *Karshapanas* being assigned by him to 500 or 600 B.C (Smith,1906,p. 133). In this regard, D.R.Bhandarkar made an assumption that the Indian coins were probably invented in 7th century B.C. (Bhandarkar, 1921, p.46). Joe- Crib forwarded his supposition and placed punch- marked coins a bit later in 5th century B.C.

If we re-examine the date suggested by A. Cunningham, who placed the earliest coin in 1000 B.C. As he made his claim on the basis of *jataka* stories that the Punch-marked coins were current during the life of Buddha and the begging of coins might be much earlier than Buddha life. The earliest date assign to Vedic books are 1500 B.C, and we also mentioned that Vedas are the only authentic source regarding ancient economic history of India. So, 1500-1000 B.C, this was the period when Vedic books were passing through composing period. Most of the references we came across in Vedas are about some sort of metallic ingots, mostly of gold, which were used for trading purposes. But we cannot call them coin and these pieces have never been unearthed from any part of Sub-continent. So these lumps must take a certain time to get the form of coins. So we may safely conclude here, that the earliest coins of Indian subcontinent might be made not later than 6th century B.C.

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