

IN AND OUT OF THE INTERACTION SPHERES: EXPLORING MONEY IN THE BAY OF BENGAL NETWORK

Susmita Basu Majumdar

At the outset I would like to thank Professor Enamul Haque and the board of trustees of the International Centre for the Study of Bengal Art for inviting me to deliver this keynote address. I still consider myself as a student of Ancient Indian History and Culture whose understanding of history is still at its base level, especially when it comes to numismatics, the more I explore the more remains unknown and unexplored. To unravel the past and to develop a clear understanding of money and money matters is one of the most complicated issues in the process of unfolding or reconstructing the history of a region. It involves not only money in its issued form i.e., metallic currency but also commodities or non-issues. Hence for today's address I have selected to explore money in the Bay of Bengal network. This being a platform for Bengal Art we shall be keeping Bengal at the centre of our focus and explore money and money matters in a broad region of Indo-Southeast Asian network which is an imaginary space that includes both the land and sea and is usually designated as the Bay of Bengal Interaction Sphere (Manguin 1996: 191, Gupta 2005: 22-30). While dealing with Bay of Bengal Interaction Sphere (henceforth BBIS) two more spheres have to be taken into considerations which intersect at the BBIS: one is the Red Sea-Indian Ocean network here mentioned as Indian Ocean interaction sphere and the third one is the South China Sea interaction sphere. It is the interconnectivity of these three spheres which shapes up the economy and to some extent the culture of the BBIS.

It is interesting to note how Bay of Bengal acquired nomenclatures to denote its maritime space. The earliest author to give it a distinct name was Ptolemy (c. 150 CE) who knew it as the Gangetic Gulf. On the one hand Sanskrit texts and inscriptions knew it by the generic appellation, the eastern sea (*pūrva-samudra/prāk-samudra*). Already by 971 CE the designation, *Vaṅgasāgara*, had already appeared in an inscription from Bengal (Chakravarti 2007). By the late tenth century the sea-space was called Bahr Harkand/Harkal (i.e., the Sea of Harikela, Harikela denoting the present Chittagong region of Bangladesh).

BBIS comprises of the eastern coast of the Indian subcontinent and includes Bangladesh and Sri Lanka on the western front whereas on its eastern part it has Myanmar, coastal Thailand, coastal Malaysia and Indonesian island of Sumatra. Along with the above for the sake of convenience the Andaman and Nicobar islands have been included in this Interaction sphere. Trans-peninsular routes through the upper part of Thai-Malaya Peninsula – The Isthmus of Kra provided the shortest passages from the Bay of Bengal to the Gulf of Thailand saving sailors the longer journey around the Malacca Straits. This helped not only to connect with mainland

Southeast Asia but also established a connection with South China and Far East. South China Sea Interaction sphere was a separate sphere and had its own network and demands. These often coincided and the nodes of interaction were located in Southeast Asia. The Indian Ocean Maritime interaction sphere, (this term has been used here for the first time) involves Red Sea or the Mediterranean contact with the Indian subcontinent especially involving the demand and supply chain in the Roman world for procuring goods of Indian or Southeast Asian origin. Here we would like to explore the overlaps or interconnectivity of the spheres.

Bay of Bengal and the South China Sea networks coincided in Southeast Asia at nodes such as Khao Sam Kaeo (Bellina 2016: 483). Such nodes in the BBIS acted as exchange centres for the South Asian and South China Sea networks. This confluence of the exchange networks helped to enhance the level of interaction of these networks and create demand for goods for exchange. At such nodes besides merchants from all the networks, artisans and craftsmen also settled and would have engaged in not only exchanging but also producing goods to cater to local elites and vendors from BBIS as well as South China Sea network.

Trade and exchange networks include the study of the objects or commodities their place of origin or provenance, depositional context, trans-shipment area and trade routes engaged in the process of import and export. Linguistic studies, also at times, provide idea regarding the exchange network or the movement of the commodity. Besides the trade and exchange the interest or the thrill of knowing the unknown or controlling the unknown is also another factor which would have led some of the explorers to explore the Bay of Bengal and this would have created further opportunities or enhanced the interactions in the BBIS.

Interactions in the BBIS would have commenced due to the continuity of the land mass and the movement of people along the landed continuum either thorough inland or following the tracts of the coastal hinterland. There are three major trade networks which emerge in a big way highlighting the inter-connectivity of the three spheres under discussion. Firstly the bead network which connected the Bay of Bengal littoral to the remote parts of Southeast Asia, Southern China and the Far East. Second network was the so called spice trade network which had spices and medicaments from Bay of Bengal littoral through Southeast Asia carried to the western world for ultimate consumption. The third is the cowrie-horse network which connects China to Bay of Bengal through littoral parts of northeast India to ports on the eastern sea board of peninsular south and also through land network to the western coast and ultimately to Maldives.

To look at the Indian Ocean and its connection and involvement one has to look for the trading goods and items. This is mainly the spice route, the demand for spices like cinnamon, cassia and pepper in the western world acted as catalyst. The Roman world and its exploration of the east contributed to a great extent towards the enhancement of the activities in the BBIS. It was largely black gold i.e., pepper, the demand for which was worth making such difficult

journeys across the unknown. Apart from pepper it was nard which was derived from a root of the *jaṭāmāmsī* plant. The oil extracted from nard was in much demand and was very costly. Besides its medicinal usage the ritual use of the fragrant nard oil is attested from various sources. Nard was procured mainly from two regions Kabul in the northwest and the eastern Himalayas. However, the anonymous author of the *Periplus Marie Erythrai* mentions the latter as Gangetic nard. Gangetic nard is a misnomer as this plant only grows in the hilly areas. The only factor for which it might have acquired this name may be, that the people involved in the trading of this fragrant oil were traders of the Ganga valley and hence the name Gangetic nard. It was used as a fragrance and medicament for curing nausea, vomiting and headache. It was extremely expensive so would have earned great profits in the west. Eastern Africa is mentioned as the source area for Cinnamon and Cassia. According to Sunil Gupta these were not products of the East African origin, it probably acted as the trans-shipment area for the trade in such objects. Thus the area from which the traders hailed again gave the idea of east African origin of cassia as in case of Gangetic nard discussed above. Cinnamon and Cassia were in demand in the Greek and Hebraic societies. Nutmeg and cloves were also in demand all of which along with cinnamon and cassia came from Southeast Asia. Evidence of cinnamon from South/Southeast Asia has been found from Israel in a flask dated back to c. 10th century BCE. Similarly camphor was imported to Indian subcontinent from Barus in Southeast Asia to be shipped to the Mediterranean world. Malabathrum was also exported in large quantities and according to the text of *Periplus Marie Erythraei* its export was next to pepper.

As far as the exchange and trade in metals was concerned, India did not have ample silver. It was dependant on reserves from Afghanistan and Burma. South Asia on the other hand had highly developed metal working skills and could produce objects in gold, silver, copper, high-tin bronze and so on. As far as the production of High-tin bronze objects is concerned the glitter which the freshly made objects had was close to that of gold and was in high demand mostly as religious cum cultural objects, soon these also became a part of prestige goods. The demand was created probably by the relatively lesser availability of the raw materials and the activity in the interaction sphere intensified due to the shared resources thus often leading to the import of metal or metal workers and skilled professional artisans. The interaction between the technological experts and artisans gave birth to common or shared technological practices, exchange of ideas, motifs, usage and human resources. South Asia contributed in the exchange by providing metals like copper for the production of high-tin bronze. It was produced with Southeast Asian tin and a shared technique from South Asia. This reveals the complexity of the network. Finished products were produced both for mainland or insular Southeast Asian populations and at times also made their way to South Asia and occasionally to South China. In Southeast Asia these products circulated along with Chinese imports. Some of the gold and hard stone ornaments found in Chinese tombs show striking similarities with those from Khao Sam Kaeo which could have also produced for China. As far as the antiquity of this interaction spheres are concerned

Bellina shows how in the Upper part of the Thai-Malay peninsula Khao Sam Kaeo attests to the presence of South Asian groups as early as the fourth century BCE. In the closing centuries of the pre common era traces of the contacts become prominent and as archaeo-markers we get beads (especially the distribution of the Indo-Pacific glass beads) and pottery (especially the Rouletted Ware) which point towards a constructive interaction in the area under study (Bellwood 1992: 55-136; Glover 1996: 129-58; Higham 1991: 330; Ray 1991: 357-65).

Scholars have identified several routes like spice routes, silk routes, cowrie routes, horse routes etc. These terms have been coined mainly on the basis of the principal product of high demand. However, such routes involved the movement of multiple goods. Mainly there were three kinds of routes the land routes, the maritime routes and the land and maritime routes. Trade in goods was often segmented. Small routes mostly on the basis of old and popular routes relayed the goods and handed them over to the next station for further relay. This involved huge costs as with the involvement of each intermediary, the price of the goods increased. But at every juncture some indigenous or local product in demand could have been a good incentive for the segmented option. This was also opted for purposes of safety. Long distance trade was profitable but at the same time it would have involved high risks of journey and risk of plunder while on the move. Land routes were long and tiring and often opted to avoid the risk of sea journeys and also for carrying heavy goods which was a constraint while making sea voyages the cargo limit was a prime concern.

Initially the objects of demand or goods for exchange were mapped with the help of the mercantile community. Once such objects were identified along with their source or source of production the rarity and the difficulty in making the goods reach their final destination would have decided on the fixation of the price of the commodity. Such goods are mainly products of indigenous origin which were produced at a place and were in direct demand i.e., did not involve any further processing to turn them into finished goods for sale like pepper, spices like cardamom, cinnamon, cassia, nutmeg and so on and other medicinal roots and produces like nard, camphor and so on. Products like ivory, pearls, shells, cowrie shells and so on also were in high demand in specific zones. Then the next category was of raw materials or minerals and gems like beryl, jade, agate, carnelian, sapphire also fetched good profits. Minerals like copper from South Asia, tin from Southeast Asia, lead and glass from Mediterranean also had specific demands and markets for sale. These were traded in their ore/raw forms and also as finished products. These ores and metals instigated the artisans or metallurgical experts to share their expertise and hence this involved the travelling of the skilled artisans or engaged mobility of human resources. It gave rise to a shared technological tradition of making of objects in demand. Religious traditions also travelled along these spheres so did the missionaries responsible for the spread of the religious ideas outside their own land of origin. As by-products the ritual objects travelled and gained currency in distant lands. Such cultural interactions involved the social, cultural and material network binding together the Bay of Bengal interaction sphere.

This involved a highly complex system of market economy which did not depend directly on money. As far as the economic angle is concerned one can trace three different transactional modes. Firstly the simplest one i.e., **barter economy** which principally depends on the coincidence of needs and is good-specific i.e., direct exchange of one good for the other. Second transactional mode was **exchange economy** which involved complexity to a certain extent wherein multiple parties engage in a complex transaction and each one of them is in the chain and knows the amount and form of exchange and the channels involved. The last one is an **open market** wherein the parties involved may or may not know each other but are engaged in transaction in a common market space and can procure goods of their choice without even knowing the parties/ vendors personally. In this process there is usually the involvement of **monetary economy and also administered trade**. The market in this context is modulated by the administrative authority or the ruling authority of the region where the market is located. This also involved taxation on goods both on their entry and sale/ exchange. Exploring the conduits of exchange network, their impact and influences on the monetary scenario requires a rigorous exercise which would bring forth the real character of the BBIS. The interchange and cross currents leaving evidential impact leads one to trace back the process of this interaction to some extent. This evidence is in bits and pieces and is not a homogenous one. As far as long distance trade or long distance exchange is concerned, often did not involve metal money rather it was mostly cashless. It depended mostly on availability, demand and supply of goods in exchange, the ultimate objective being profit earning. Sunil Gupta looks at the two types of processes (a) human dispersals and techno-cultural transmissions which took over an extended period, (b) short term movement of men and material inspired by trade opportunities, sense of discovery and adventure. Conduits opened by the former resulted in the setting up of the interaction routes for the second. Thus neolithic expansion from southern China into the mainland and island Southeast Asia was the major causal element which led to the establishment of the interaction sphere.

We have already discussed the goods which were in demand in the Roman world and for the sake of which traders and voyagers made long distance journeys. In return what came from the Mediterranean world were mainly gold and silver coins, wine, raw material for making glass, lead and oil. To bring coins from the Roman empire initially the coins were to be demonetized in Rome so that the economy would not be affected due to the sudden loss of coins from circulation. Such coins are often found in the Indian subcontinent with a slash mark mostly defacing the ruler's bust on the coin device indicating an officially demonetized status of the coin. However, what is interesting is that from the 4th century BCE onwards Roman clay bullae have been reported from different sites in North India where as it is mainly three ports which are mentioned in the text of *Periplus* as being used for trade. These are Barbaricon in the Indus region, Barygaza i.e., Broach in the western coast and Muziris i.e., Kodimanal and Pattanam region in Kerala. It is the last one where the margin of profit was lucrative or the Roman coins

fetched maximum profits at Muziris. It was in the territory of the Ceras which was a chiefdom and not a kingdom hence the goods imported could evade taxation and the goods acquired by the traders could also be procured without giving extra tax to the ruling authority a good reason to opt for this port city for trading or exchange centre. Influx of Roman coins in India have been divided into three major phases initially the silver coins then the gold coins i.e., *aureus* and later thin gold coins known as *solidi* and copper coins. Imitation Roman coins were minted in South India and have been reported in large quantities. Some of them are good quality imitations and rest quite crude. These were mainly used as prestige markers or prestige goods often worn as pendants. Some coins have been reported which are known as hybrid coins these were not coins there were tokens or pendants with obverse device of one coin often clubbed with a reverse device of another coins even far removed in parameters of time. The purpose was to create an exquisite or prestige token just for possession and not as a media of exchange. Roman coin finds from Southeast Asia requires special attention here to understand Southeast Asia's interaction with the Indian Ocean interaction sphere. One Roman coin of Victorinus (269-71 CE) has been reported from Uthong (Borell 2017: 15-22). This coin was minted during the crisis period of the Roman empire following the assassination of Alexander Severus the last emperor. The coin under discussion is a typical 3rd century coin popularly known as '*antoninianus*' or radiate. These coins are usually made of base silver or billon often with a silver coating. Bust to right with radiated crown and cuirass. The legend on the obverse reads IMP C VICTORINVS PF AVG for Imp(erator) C(easar) Victorinus P(ius) F(elix) Aug(ustus). On the reverse is the deity Salus, the personification of wellbeing and health with snake of Asclepius the God of healing and medicine which she feeds from a bowl in her left hand. The legend here is SALVS AVG for Salus Aug(usti) Health of the emperor. This particular issue was struck in mint II at Cologne and dated to 269/270 CE. This coin might have arrived here quite late as late as 4th - 5th century CE or even later. A few stray finds of the coins of the Gallic empire have been reported from Karur Tamil Nadu and Sri Lanka, Cambodia. Another coin of Maximinus Thrax (235-238 CE) the first of the soldier emperors has been reported from My Tho in southern Vietnam. Thus coins of 3rd - 4th century CE started arriving Southeast Asia. A late Roman coin of Anastasius (491-518 CE) is reported from Nen Chua in southern Vietnam. Numerous Roman intaglios are reported from southern Thailand and also a Roman glass vessel fragments are reported from Isthmus of Kra region. In the 3rd century CE one would expect a snag in trade activities. Chinese sources report two embassies from Da Qin (Roman Empire) during the Taikang era (280-289 CE) of Jin Emperor Wu. The embassy arriving on the Gulf of Tonkin in 166 CE is also recorded as an embassy from the Roman empire. Myos Hormos declined and Berenike continued up to 6th century CE. Small late Roman copper coins in substantial quantity have been reported from Peninsular South India and Sri Lanka. In southern Sri Lanka large numbers of Roman copper imitation coins have been reported. Probably these were used as currency here in second half of the 5th century CE. These coins were either treated as prestige markers or curios or exotic souvenir.

Some Roman coin pendants made with casting technique using moulds have been reported from Khlong Thom and Oc Eo. A handcrafted reproduction of a disc shaped gold repousse pendant with suspension loop. Design is inspired by the obverse of Roman coins. Another site Pong Tuk has yielded a Byzantine bronze lamp (c. 5th - 6th century CE).

The above Roman coin finds however do not attest a direct Roman contact or the inclusion of the BBIS or South China Interaction Sphere into the India Ocean Sphere. These exchanges were highly segmented. As discussed above there were a few attempts by people especially trading missions from west to visit Southeast Asia but it would not have matured as the time consumed in such travel and risks involved were probably higher and not preferred by later voyagers. Rather BBIS traders acted as better intermediaries in this complex trade and exchange process. The western trading interests which eventually got intertwined into the BBIS. Roman ventures from ports of the Red Sea into Arabia and India post 30 BCE opened new vistas.

It is further interesting to note that the depiction of watercrafts on the coins seals and sealings are only reported from the eastern sea board of Bengal. Many of the ships depicted are sea going vessels. Ranabir Chakravarti has drawn the attention of the academia to one of the sealings from Chandraketurah depicting a ship on which a horse is being uploaded is quite interesting as Bengal's trade in horses begins in the early centuries of the Common era and continues up to thirteenth century if not later. Arabian horses entered the Bengal ports and also the ports in peninsular South especially the territory of the Malayamans. Bengal ports were mainly used as trans-shipment ports for this long distance trade. Arabian horses were brought down to the ports in Bengal and were shipped to Southeast Asia and ports in peninsular South. The port of Amaravati-Dharanikota located in the Krishna estuary facilitated trade and cultural contact with the Indian Ocean regions. Arikamedu the most significant port and Indo Roman trading station on the eastern seaboard was also a major point of contact in the BBIS. It emerged as a techno-cultural hub in the west-east trade network. Raw glass was imported from Egypt to South India probably to Arikamedu which developed as a centre of production. Mediterranean emerged as a major market for goods from China, Southeast Asia, India and Sri Lanka. Bay of Bengal here was the bone of contention between China and Southeast Asia on one hand and Western coast of India and Red Sea on the other hand.

Complex long distance exchanges are distinct as the products foreign or alien to a particular space when start getting manufactured locally using the imported material from the locality of its origin it is a complex form of exchange. Pliny attests to import of asbestos (NH XIX) sourced by the west from Southeast Asia in BCE- CE transition (Cameron 2000: 47-51). Sri Lanka became a major part of the BBIS. Ancient harbor sites of Mantai and Godavaya are among the most significant sites in Sri Lanka. The production of Indo Pacific beads at Arikamedu and Karaikadu and similar beads in Phu Kao Thong and Khuan Lukpad on the Thai

coast and Kuala Selinsing in Malaysia. Large imports of Indo-Pacific type glass beads from BBIS have been reported from Japan and Korea. At some of these sites similar raw materials have also been discovered. Similarly agate and carnelian bead production was also increasing and evidences from Cambodia (500 BCE -500 CE) are strong enough to show the expanding exchange networks and their complexities giving rise to long distance trading networks and steady demand for such luxury items indicating the presence of powerful elites across the BBIS.

Involvement and Need for Money or Metallic Currency:

There may be four different types of exchanges one which is based on coincidence of needs popularly known as barter economy. The constraints of barter economy led to a further complex barter which we may call reciprocal exchange wherein two or more groups get involved for exchanging their goods for the sake of profit earning. Like barter the latter does not involve money as it is directly a matter of goods for goods. Balance structure lies on demand and supply. Basically exchange of vendible commodities between two consenting groups involved in exchange for earning profit out of the whole transaction. When the profit earned out of the exchange is steady and large it arouses the interference of a third party which gives protection to the transactions and allows a smooth transfer and safety of the whole procedure. Herein the power groups or the ruling authorities barge in. They look after the acquisition of commodities and the distribution takes place through a channel created by the administrative machinery of the authority itself. A more complex system is a market exchange wherein the transactions take place in an open market space with the consent of the ruling authority, which gains taxes out of the process of exchange which takes place at the end of the day in the market as a whole. Here the parties involved in exchange need not know each other. In case of long distance trade where maritime activities are involved or even further complex intersection of the maritime long distance with the littoral trading community of the long distance land trade routes the exchanges may happen in entrepot or trans-shipment centre or in the intersection or convergence zone lying between the end of the inland route and maritime trans-shipment centre.

Coming to the case of non-issues in our chosen area we come across ingots of metals, dust money and cowries. Cowries from Maldives were in high demand and were used as money in South Asia as well as China at a later period Southeast Asia also adopted them as money this giving way to a common currency in the BBIS and South China Sphere of influence. Cowries were exported from Maldives using the Malabar-Maldives maritime area to Bengal coast and thence onward to Brahmaputra/ Assam valley through the Indian northeast to Myanmar and southern China. Discovery of hundreds of Indian Ocean cowries together with Pacific ocean cowries from Shizaishan (Yunan, Southern China) in decorated bronze containers dating to late centuries BCE. Imitation cowries of clay dated to c.1st centuries BCE have been found in the at the Han period site on Jinsuo Island in the Er Hai lake of western Yunan close to the border with Myanmar and in proximity to north-east India. The discovery of Indo Pacific beads from

north-east on this cowrie route suggests the regular use of this route for exchange. Sekta in Manipur valley which is located at the crossroads leading to Myanmar and southern China has yielded hundreds of these beads. These beads are similar to those produced at Arikamedu (Gupta 2018: 9). Gupta considers the cowries among prestige goods or artefacts having specific social function. However, the present author has already shown elsewhere that the cowries were media of exchange as also ritual objects thus having multi-dimensional objective.

Southeast Asia did not use cowrie shells as currency as early as China or India but gradually in the later phase it also started using the cowrie currency. More than adopting this as a currency maritime Southeast Asia and even mainland Southeast Asia also was involved in the trade in cowries. It might have emerged as an intermediary in the cowrie trade with China and also India. A linguistic approach can provide interesting inputs. Cowries were mainly procured from Maldives islands; the local word for cowries in Maldivian language is *kabtaj* or *boly*. The Chinese who were one of the earliest to use cowrie shells as a regular currency had two words for denoting cowries one is *bei* or *haibei* from which the Malay word *biya* was derived. This indicates that the Chinese were trying to procure cowries through the Malay territory either from the Philippines or Sulu islands or from the South China Sea. There was a crisis of cowrie shell supply or its procurement in this region sometime around the 3rd century BCE and the period to follow and hence Maldives islands emerged as an alternative source of cowries. The later Chinese texts use the term *kaoli* which is derived from the term *kaṇḍi/kauri* in Prakrit (Heimann 1980: 48-69, Basu Majumdar 2014: 585-605). Thus in the early part of the Common era the Bay of Bengal network was active and Madhyadeśa was already using cowries as regular currency. This must have happened at least before 5th century CE as Faxian (399-415 in India) in his accounts spoke about the use of cowries. Cowrie currency became a common exchange item and also a reference point in the larger overlapping maritime trade network of Southeast Asia - China and Bay of Bengal Network sometime between 3rd century BCE and 3rd century CE. As Bin Yang has argued these also served as a common currency in this larger exchange network and goods have been exchanged by assessing their values in cowries.¹ Like cowries trade and exchange in metals was another very important feature of this trade- exchange network.

Metal Money:

As far as the beginning of coinage in Southeast Asia is concerned it was in the early centuries of Common era. There were two distinct zones in Southeast Asia, viz., the mainland part consisting of Cambodia, Laos, Myanmar, Thailand and the Malay Peninsula and the second, the Indonesian Archipelago. This coastal tract was connected with northern Myanmar, particularly Arakan and also with Thailand to its south. The device or the coin design had an Indic influence, as far as symbolism is concerned. The script used on the coins is also a derivative of Brāhmī thus the script had also travelled to Southeast Asia. Robert Wicks refutes the Indic influence and according to him the device originated in mainland Southeast Asia but

the present author has shown on the basis of hard core evidences how the basic device on the coins may be traced from a contact with the Sātavāhanas (c. late first century BCE-225 CE) and their contemporaries initially and later with the Pallavas (c. 500-850 CE) and Viṣṇukuṇḍins. It evolved as a result of interaction with peninsular South, especially the region of Karnataka played an important role from the 1st - 2nd century CE.

Though Southeast Asia is a huge region with geo-cultural diversity yet when it comes to metal money they reflect a shared common reverse device. The reverse device on majority of the coinage is similar or has evolved out of a basic device i.e., the Śrīvatsa symbol. Thus the whole of Southeast Asia consciously opted for or adopted a particular device on their coinage. This is a shared tradition. It is possible to attempt a relative dating of these coins on the basis of the study of typological progression of the device in each region. However, the progression of the device did not always follow a linear pattern as they developed in each region in its own way.

There is a pre-Śrīvatsa coinage as well and these were the earliest coins of Southeast Asia. The pre-Śrīvatsa coinage was followed by the Conch: Śrīvatsa type coins. As we have already pointed out that the Śrīvatsa symbol became the common cultural marker and was adopted as a universal shared common tradition for all the metal money issued in Southeast Asia. The obverse devices kept changing and the reverse only progressed in chronological order in degeneration/ progression. Mahlo assumes that coin production in early Southeast Asia originated from present day Myanmar region (Mahlo 2012). As far as mainland Southeast Asia is concerned coins were first introduced by Mons in the Gulf of Martaban and neighbouring regions. Mon cities of South Burma struck silver coins from a very early date. The coinage of the early Mons reflect a direct connection with the coinage of peninsular south India especially Karnataka, Andhra and also the west coast coinage. These initial coins of the Mons became prototypes for the coinage issued by the eastern Mon kingdom of Thailand and also for the coinage of the Arakan region.

Lead coins bearing *Nandipada* on the obverse and Śrīvatsa on the reverse issued by the Ānandas or the Cuṭus in the Banavāsi region had wide circulation. Some uninscribed coins with *Nandipada* on the obverse and Śrīvatsa on the reverse have been found in the Chandravalli region, Chitradurga predated these Ānanda or Cuṭus coins. These became the prototype for the early Mon coinage. On another set of coins of the Ānandas or Sātavāhana contemporaries found from Chandravalli region the device is multiple arched hills on the obverse and *Nandipada* topped by the triangle headed standard. It is distinctly the same as the symbol depicted on the Southeast Asian coins found in South and central Burma. The device on the coinage issued in the Gulf of Martaban in Southeast Asia seems to be directly adopted from this coin device.² As far as the Sātavāhana contacts with Southeast Asia is concerned it was a direct contact through the eastern seaboard as the rival Śakas were becoming more and more active on the Gujarat-Kathiawad coast. The Sātavāhana would have opted for an eastern Deccan orientation to their

political aspiration. It is worth mentioning that Sātavāhana ship type coins depicting double masted vessels have been found from the eastern Deccan. Sātavāhana coins bearing ship with two masts were issued by Sri Pulumavi and Sri Yajña Sātakarni from coastal Andhra.³ It is interesting to note that the Pallavas, as successors to the Sātavāhanas in Andhra, also issued the similar ship type coins depicting double masts. This firmly attests to the continuity of the Southeast Asian contacts during the reign of the Pallavas. *The Periplus Maris Erythraei* (c. late first century CE) and Ptolemy's *Geographike Huphegesis* (c. 150 CE) mention an *aphaterion* (departure points of ships), located near Allosygne and Kontakosylla (or Ghantasala, i.e., in the Krishna delta), to reach Chryse Chora (Suvarṇabhūmi) and Chryse Chersonesys (Suvarṇadvīpa). The said two regions clearly refer to mainland and maritime Southeast Asia with which shipping networks seem to have been operative at least since the 1st Century CE. An inscription of c. 1st century CE from Ghantasala has probably the earliest mention of a *mahānāvika* which attests to an early notice to shipping activities across Bay of Bengal. This *mahānāvika* or a senior mariner could have reached Southeast Asian destinations across the Bay of Bengal (Ghosh 2006: 65-69).

Bang Kluai Nok on the western coast of Southeast Asia a node like Khao Sem Kheo also yielded a gold seal of a mariner i.e., *nāvika* bearing a significant Brāhmī inscription read by Oskar von Hinüber and Peter Skilling as *br̥haspatiśarmāsanāvika* meaning "Of the sailor or mariner Bṛhaspatiśarmā" The name Bṛhaspatiśarmā clearly indicates that he was a *Brāhmaṇa*. Thus *Brāhmaṇas* in the 2nd century CE could make a sea voyage which was not prescriptive as far as the textual injunctions reveal. This inscription reminds one of the *mahānāvika* "*Buddhagupta*" stone slab, which was found in Seberang Perai (formerly Wellesley province), Malaysia.

Finally, Bang Kluai Nok also provided Moulded glass bowls, in particular the ribbed type which were part of the traded commodities in the Indian Ocean, from the Red Sea coast to the sites at Pattanam, Arikamedu and Dharanikota on the Indian subcontinent. They appear to have been mass produced from the first century BCE to the first century CE. Thus the sites of Bang Kluai Nok and Phu Khao Thong had distinct connections with ports in the peninsular south and were parts of the same trade sphere with long distance connections.

This contact with the eastern sea board of South Asia was more direct but our study has also reflected upon the west coast connections particularly with the territory of the Śakas and Banavāsi region. The Sātavāhanas issued coins in both lead and potin and the availability of lead in peninsular south is a well-known fact. The demand for lead could have been more than its local availability and this explains why lead was also imported from Rome. *Periplus* also mentions about the imports of this metal to India (Schoff 1974: 142). Sri Lanka was also importing lead from India or Southeast Asia (Bopearachchi 1999: 12-13). Burma and Thailand had rich silver, tin and lead deposits and this would have been one of the possibilities of procuring of this metal from Burma and Thailand via the Gulf of Martaban. Tin was probably also imported from Southeast Asia to mainland South Asia by obvious overseas network. The regular demand for bronze for

artisanal and sculptural output in India, which has no tin deposit, would certainly require sustained supply of tin from the tin-rich Southeast Asia. It was all these factors together which generated the need for maritime contacts with Southeast Asia. Moreover, at least two Sātavāhana coins are reported from Southeast Asia. One of them is late Sātavāhana silver coin bearing a Bull: Ujjain symbol has been found from Donwun weighing 8.4 gm. Another specimen of this type was also reported from Theinzayat near Kyaikto (Than Htun 2007: 77).

Firstly *Mahākṣatrapa* Vāsiṣṭhiputra Isamahisa (c.1st Century CE) issued the Junnar type coins and these bear a degenerated composite lion and elephant standard which again evolved out of the Vṛṣṇi-Ābhīra coinage (see the typological progression of the device in (Mitchiner 1998: 90). This symbol is found depicted in the centre of a *śrīvatsa* (Mahlo 2012:15a 2). Pyu coins modelled on the Mon coinage or receiving influence from the Early Mon series. It is worth mentioning here that coins in Southeast Asia were issued in such weight standards which made interactive exchange quite easy as all are in multiples and sub multiples facilitating inter and intra territorial exchanges. This was to expedite the brisk trade transactions.

A close examination the reverse device i.e., the *Śrīvatsa* can be arranged in a sequence of typological progression. In the region around the Gulf of Martaban one finds that the types issued had more than four varieties viz:

Wheel: *Śrīvatsa* type.

A degenerated form of the elephant lion composite standard later turned into a *Svastika*: *Śrīvatsa* type⁴

Puṣpagrahaṇī: *Śrīvatsa* type.

Conch: *Śrīvatsa* type.

Interestingly enough, of these devices the first two have been adopted from the western coast of Peninsular South India and the contact is probably with the Śakas the adversaries of the Sātavāhanas and the third one was from the contact with the Sātavāhanas from Karnataka- Andhra eastern seaboard.⁵ The first type was adopted from the Vṛṣṇi wheel device and the second also originated in the Vṛṣṇi coins as a composite elephant-lion standard. But here we find a degenerated version of the standard. This motif also underwent a progression in the Indian context and the symbol is found in its degenerated form on the coins of the Kṣaharātas. On one coin from Southeast Asia the standard is clearly visible. But this again was not intelligible to the Southeast Asian die designers and it was later turned into a *Svastika* with which they were familiar.

As far as the early Mon coins of South Burma are concerned, the commonality factor here with the early Pyu coins is the reverse device. It shows a direct interaction as the reason for such similarity whereas the obverse device is a basic territoriality factor which distinctly segregates the Mon territory from the Pyu. Some Mon coins adopted the device of Bull: *Śrīvatsa* and later following the Viṣṇukuṇḍin (5th-6th Centuries CE) coin type issued the Lion: *Śrīvatsa* type.

However, the depiction of lion by the Mon die-engravers was quite indigenous and had no resemblance with the Viṣṇukuṇḍin lion. However the stylistic treatment of the lion provides a clear clue to the die engraver's using the model of the Viṣṇukuṇḍin coin (Pieper 2013: 292-93, 757). On the Mon coins we find a front facing lion. Some of the coins also depict a crudely made bull which has been wrongly identified as a hare.

Coinage of the Malay Isthmus i.e., Isthmus of Kra is completely different as this region was a gold using zone and issued tiny gold coins. Rest of Southeast Asia was issuing coins only in silver. This indicates a specific territoriality of these coins. It is worth mentioning here that the territory of Samatata in South eastern Bengal (Noakhali- Comilla area, Bangladesh) was also issuing gold coinage from c. 2nd century CE to 7th-8th century CE (Basu Majumdar 2014: 585-605). The Samatata device was a derivate of the Kuṣāṇa gold coinage and had no connection with the Southeast Asian numismatic context (Mukherjee 2002, Basu Majumdar 2009: 279-286). On the other hand when we look at the device of the issues from Isthmus the overarching factor of commonality with the Southeast Asian numismatic context is striking and we find that the same device of conch and a stylized Śrīvatsa derivative being used here. The noticeable distinctiveness is only in the choice of the metal.

Metal money originated in south and central Burma due to its interaction with peninsular South India. The coins of Karnataka especially the Chandravalli area became direct models for issuing of the pre Śrīvatsa coinage in Southeast Asia. In this context the similarity of early coins of Southeast Asia issued from south and central Burma with the Ananda/Cutus coins especially is quite significant. Other linkages have also been shown like the adoption of a particular standard from the coins of the Śakas of Junnar-Kolhapur region may also suggest a remote western coast linkage. Then the process continues and the present author has shown elsewhere the multiple points in contact which led to the adoption of a particular motif or device on the coins of Southeast Asia. It is a very complex picture of multiple level contacts both intra level and inter level networks. Gulf of Martaban played a very important role and was the point of contact with peninsular South India on one hand and Bay of Bengal on the other. It was the trade in metals especially silver, lead and tin along with precious and semi precious stones which necessitated and intensified the interaction between mainland Southeast Asia and South Asia. The beginning of metal money in Southeast Asia is almost a by-product of this metal trade or exchange. Karnataka and the eastern coast of India during the reign of Sātavāhanas and their contemporary local powers interacted with the coast of Southeast Asia through the Gulf of Martaban. Thirdly we have also argued that this initial coinage were prototypes of the local coins of Chandravalli region in peninsular South India. The link between the different regions has also been established which shows that the coinage began in South and Central Burma and continued with early Mon and then adopted by the Early Pyu. In the mainland then we find each region developed its own coinage with a common shared tradition of commonality in their reverse device.

The awareness of Ptolemy regarding Takkola and the possibilities of reaching mainland Southeast Asia (Chryse Chora of Ptolemy and *Periplus*) by crossing the Bay from Andhra coastal tract (where stood Kontakosylla, Allosygne and an Aphaterion) which was under Sātavāhana occupation from the time of Gautamiputra Sātakarni now with above numismatic evidence become further strong.

Conclusion:

Two major maritime exchange networks became closely aligned: the spice trade network between South Asia and Western world centring Rome and the maritime network from South Asia through Southeast Asia to Far East involving cowries. Direct maritime linkages between the Mediterranean and the subcontinent worked as a catalytic factor. Exploring for goods in demand probably led the explorers to plunge into taking risks of high sea voyages for the sake of earning more profits. Roman interest and demand for spices, ivory and medicinal herbs and roots intensified the search for cheap procurement of such objects. Roman coins and their finds have been mapped in a broader context to understand the overall scenario. It not only intensified the intra-exchange in the coastal network on Eastern seaboard of the Indian subcontinent but also acted as a catalytic factor for inter-exchange of goods in the Indo-Southeast Asian network. The author of the *Periplus Marie Erythraei* also indicates on the voyage to Chryse (Island Southeast Asia) Ptolemy's *Geographike Huphegesis* also points towards the journeys up to Southeast Asia. Penetration of Mediterranean commerce into the BBIS signifies the appropriation of the old cinnamon network by the western world. Segmented efforts made voyages easy and gradually to reduce the cost of procurement of goods a more structured long distance network would have been established. We have thus seen the complex interconnectivity which led to a common shared tradition in a broad zone. We have also seen how certain centres in the Indian subcontinent especially in the Peninsular south and coastal Bay of Bengal emerged as nodes and similarly how such centres can also be located in Southeast Asia. The above exercise finally reflects on the interconnectivity of the spheres and the demand for goods, mutual understanding, inter-dependence for shared demand especially in case of metal and metal working and ultimately the emergence of a shared tradition. The common factor in the coinage of Southeast Asia the reverse device is enigmatic. What emerges is a very complex system and the broad canvas has made the boundaries (between the regions, countries, subcontinent, the three spheres) blurred and the picture which finally emerges is further blurred. Let us begin with this blurred vision and keep magnifying with detailed micro study through powerful lenses to evolve a better picture.

When one looks at money in the three spheres under discussion these have separate evolution patterns yet their impact on the money in the second sphere i.e., BBIS is quite interesting. Money in the closing century of the BCE and early centuries of CE in the Indian

Ocean interaction sphere emerges as a strong element which had a *primary effect* over the western coast of the Indian subcontinent and the also the BBIS. These were the Roman denarius or silver coins and Roman i.e., gold coin though besides these two we also find influx of Roman copper coins and thin gold *solidis* in the third phase. These were demonetized in the country of its origin to move them away from circulation. Most of the scholars are under the impression that Roman coins were accepted as bullion in the Indian subcontinent i.e., they were accepted at their intrinsic value or the value of the precious metal content in the coins. However these gained currency in trade in South Asia. The large amount of Roman coin finds from different sites in Peninsular South India reveals that they were not melted away and were in circulation not directly as money but as reliable metal objects. These also had a *secondary effect* on the money market in the southern part of the subcontinent. Roman coins were imitated and locally manufactured. Then there were hybrid coins wherein the obverse of a coin was clubbed with another obverse or reverse of a coin which was far removed in time. Roman issues almost became prestige markers and exquisite cultural objects often worn as pendants. The *tertiary effect* of these Roman coins can be seen on the eastern extremity of the BBIS i.e., on Southeast Asia. The discovery of some specimens of Roman coins mostly replicas from Southeast Asia is an interesting phenomenon. These are mostly prestige markers or pendants which were locally produced. This can be interpreted as a ripple effect. Thus the Southeast Asians knew about the value of Roman coins as well as the possession of even replicas made them an elite in the society and probably upgraded their social status. The demand for commodities from South Asia and Southeast Asia in the western world acted as a *catalytic factor* and resulted in a causal nexus. Cumulative effect of the influx of Roman coins and the demand for exotic eastern goods in the western world resulted in the chain of events and set the pace of this *causal monetary nexus*.

Money and money in the BBIS is again a very interesting and complex issue which needs to be addressed from an aerial approach. As far as metal for minting money is concerned Bengal only had copper reserves and it depended on Southeast Asia for silver, tin and lead. On the other hand Southeast Asia had to depend on copper and artisans and skilled metal workers from Bengal and South Asia. This gave birth to a shared tradition. The trade in metal and demand for metal along with the movement of skilled labour across the BBIS led to concatenation of events. In Bengal metal money emerged in c. 3rd century BCE if not earlier and the metal came from Southeast Asia thus the BBIS was already a major factor in the emergence of metal money. Later south-eastern Bengal opted for gold currency for which again it had to depend on trade or exchange as Bengal does not have gold reserves either. It was the inert-connectivity with the Silk route especially (SSR) which exposed them to Kuṣāṇa contact and Kuṣāṇa coins initially became prototype for issuing of coinage in Samatāṭa. Later with the coming of the Guptas the coinage underwent a gradual change and the obverse device was adopted from Gupta coinage and reverse device was the continuity of the previous reverse device of the Kuṣāṇa coins. This is a unique phenomenon of the making of a *hybrid coin* in South-eastern Bengal.

Coins travelled with traders, ideas with artisans, skills were acquired and devices and motifs also influenced the making of money in the Southeast Asian context. A thorough and careful study of the numismatic specimens helps is to trace trends in inter-connectivity. Coins of one region having direct impact on the coins of another region, far removed in context of space, is a clear marker of inter-connectivity of both the regions. When one tries to trace such inter-connectivity there certain specific points of contact which emerges in a distinct fashion. The connectivity with the west coast is through a shared motif which has been directly absorbed from the motif i.e., the composite lion and elephant forepart on a standard, used on the coins of a local ruler of Junnar located near the Naneghat pass. This clearly indicates a direct western sea board connection with Southeast Asia. Another major motif which was directly taken from the coins of Ā Ānandas and Cuṭus who were Sātavāhana contemporaries also reflects on the multiple points of contact with Deccan both eastern and western. This is the *nandipada* symbol topped by the *indradvaja*. Third motif which was adopted was an eastern Deccan art element described in the epigraphic records as puṣṭagrahaṇi or flower receptacle. This was identified as *bhadrapīṭha* by some scholars. This has a Buddhist connection as it is found depicted on *Buddhapadas* from Deccan. Fourth is the lion motif which is seen on the Viṣṇukuṇḍin and Pallava coinage. Though we have shown four instances which initiated a coin type in Southeast Asia but their development and progression was totally a local affair. One can trace *intra-connectivity* in the evolution of the coinage pattern in Southeast Asia. A study in the *concatenation of intra-connectivity* in the monetary scenario makes the complex picture clear. Concatenation here in the present context means the action of linking the motifs together in a series or the condition of being linked in a specific manner. However concatenation literally means to link two things together but in this context it is more of a *string concatenation* wherein it is a series which follows after a certain motif or device is adoption.

The most significant part of the causal nexus is the shared tradition of the common reverse motif which emerged almost all over Southeast Asia. Till now scholars have put forth several connecting links and influences that flowed across the BBIS. But now it is time for a *causal analysis* i.e., find the causes that led to the process or the ultimate shaping of the monetary scenario in BBIS rather than stating symptoms or tracing individual contact points/ elements. The root cause lies in a complex demand supply chain and maintaining of balance of power in the trade/exchange network. Understanding the interaction taking place on these spheres leads one to understand the evolution of money in this broad geographical zone. It is a complex study of multiple ‘*domino effects*’ i.e., the situation in which one event causes a series of related events one following the other.

Notes and References:

1. Even to this date the currency denomination markers of some of the major currencies of South East Asia run into thousands and lakhs and higher ups as these were initially in cowries and hence their

counting systems and calculations in were usually in lakhs to millions and billions from a habit of calculating in terms of cowrie shells. For details on cowries in Bengal and in Indian context see Basu Majumdar and Chatterjee, 'Cowries in Eastern India: Understanding their role as ritual objects and money', *Journal of Bengal Art*, Vol. 19, ed. by Enamul Haque, Dhaka, ICSBA, 2014, pp. 39-56.

2. For the type of coins issued by the Ānandas and Sātavāhanas contemporaries see Mitchiner, M., *The Coinage and History of Southern India*, Part One, Karnataka-Andhra, 1998, p. 77. Coin no. 65-67.
3. *Ibid.*, p. 94, coin no. 138.
4. As far as this Vṛṣṇi composite lion-elephant standard on a base device is concerned this peculiar standard depicting a composite animal lion and elephant is found on the Vṛṣṇi coins from Sunnet. Later this symbol is found depicted in typological progression in the coins of the Ābhīras and Śaka-Kṣaharāta family. It is also found on the coins of Southeast Asia on a very early series where the śrīvatsa is of an early type.
5. With the control of the eastern seaboard by a powerful ruling house like the Sātavāhanas who controlled with both eastern Karnataka and the Andhra area such a possibility emerges strongly. More over the ship type coins issued by the Sātavāhana rulers discovered only in the eastern part of their Empire makes it more clear about the possible Southeast Asian connection.

Bibliography:

- Basu Majumdar, Susmita. 'Typological progression in the Numismatic Art a Case Study of Bengal Gold Coinage', *Journal of Bengal Art*, Vol. 13 and 14, Dhaka, ICSBA, 2009, pp. 279-286.
- Basu Majumdar, Susmita, 'Issues and Non Issues in the Monetary History of Bengal', in D.N. Jha edited, *R.S. Sharma Commemoration Volume*, 2014, pp. 585-605.
- Basu Majumdar and Chatterjee, 'Cowries in Eastern India: Understanding their Role as Ritual Objects and Money', in Enamul Haque edited, *Journal of Bengal Art*, Vol. 19, Dhaka, ICSBA, 2014, pp. 39-56.
- Bellwood, P. 'Southeast Asia before History', *Cambridge History of Southeast Asia*, Vol. I, edited by N. Tarling, Cambridge: Cambridge University Press, 1992, pp. 55-136.
- Bin Yang, 'The Rise and Fall of Cowrie Shells: The Asian Story', *Journal of World History*, Vol. 22, No. 1, 2011.
- Bopearachchi, Osmund and R.M. Wickremesinhe, *Ruhuna, and Ancient Civilization Revisited*, 1999, pp. 12-13.
- Borell, Bridget. *Traces of the Roman World in U Thong and Southern Thailand*, Bangkok, Thailand, 2017.
- Chakravarti, Ranabir. *Trade and Traders in Early Indian Society*, New Delhi, Manohar, 2007.
- Ghosh, Suchandra. 'Coastal Andhra and the Bay of Bengal Network', *South Asian Studies*, Vol. 22, 2006, pp. 65-69.
- Glover, I.C. 'Recent Archaeological Evidences for Early Maritime Contacts between India and Southeast Asia' in *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, edited by H.P. Ray and J.F. Salles, New Delhi, Manohar, 1996, pp. 129-58.

- Glover, Ian and Berenice Bellina. 'Ban Don Ta Phet and Khao Sam Kaeo: The Earliest Indian Contacts Reassessed', *Early Interactions between South Asia and Southeast Asia: Reflections on Cross-Cultural Exchange*, edited by Manguin, Pierre-Yves, A. Mani and Geoff Wade, Singapore and New Delhi, ISEAS and Manohar, 2011, pp. 17-46.
- Gupta, Sunil. 'The Bay of Bengal Interaction Sphere (1000 BC- 500 AD)', *Indo-Pacific Pre History Association Bulletin* 25, 2005 (Taipei Papers Volume 3), pp. 21-30.
- Gupta, Sunil. 'The Archaeological Record of Indian Ocean Engagements: Bay of Bengal (5000 BC–500 AD)', Oxford University Press, 2018. (www.oxfordhandbooks.com).
- Heimann, J. 'Small Change and Ballast: Cowry Trade and Usage as an Example of Indian Ocean Economic History', *South Asia*, N.S. 3, 1, 1980, pp. 48-69.
- Higham, C. *Archaeology of Mainland Southeast Asia*, Cambridge, Cambridge University Press, 1991.
- Mahlo, D. *The Early Coins of Myanmar (Burma) Messengers from the Past: First Millenium AD*, Bangkok, White Lotus, 2012.
- Manguin, Pierre-Yves, 'Southeast Asian Shipping in the Indian Ocean during the First Millennium AD', in H.P. Ray and J. F. Salles (eds). *Tradition and Archaeology: Early Maritime Contacts in Indian Ocean*. Lyon/New Delhi, Manohar/ Maison de l' Orient Mediterranen/NISTADS, 1996, pp.181-198.
- Manguin, Pierre-Yves, A. Mani and Geoff Wade eds., *Early Interactions between South Asia and Southeast Asia: Reflections on Cross-Cultural Exchange*, Singapore and New Delhi, ISEAS and Manohar, 2011.
- Mitchiner, M., *The Coinage and History of Southern India*, Part One, Karnataka-Andhra, 1998.
- Mukherjee, B.N., *Post Gupta Coinage of Bengal*, Calcutta, Progressive Publishers, 2002.
- Pieper, Wilfried, *Ancient Indian Coins Revisited*, Classical Numismatic Group, Inc., Lancaster/London, 2013.
- Ptolemy, *Geographike Huphegesis*, Translated by E.L. Stevenson, New York, New York Public Library, 1932.
- Ray, H.P. 'In search of Suvarnabhumi: Early Sailing Networks in the Bay of Bengal', *Bulletin of the Indo-Pacific Prehistory Association*, Vol.10, 1991, pp. 357-65.
- Schoff, W.W., tr., *Periplus of the Erythraen Sea*, New Delhi, Munshiram Manoharlal, 1974 (rpt.).
- Than Htun. *Auspicious Symbols and Ancient Coins of Myanmar*, Schangor, 2007, p. 77.
- Wicks, Robert. *Money, Markets and Trade in Early Southeast Asia, The Development of Indigenous Monetary Systems to AD 1400*, New York, 1992.