OCEANIC TRADE ROUTES IN ANCIENT INDIA

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I. INTRODUCTION

The ocean trade routes in ancient India connected Southeast Asia, India, Arabia, and East Africa.It's a chapter of history nearly forgotten. In fact, by the time Marco Polo set out to explore East Asia in the 13th century, communities across Africa, Asia and the Mediterranean had been exchanging their wares for thousands of years in a vast network driven by the monsoon winds of the Indian Ocean. The most famous facilitator of long distance trade, is the monsoon wind pattern, which enabled predictable seasonal sailing on open waters. This was probably the first experience of human beings to sail outside the site of land, beyond the site of land, into the Indian Ocean. During certain months each year, the winds blow approximately from north to south in a certain way, off the heated land mass of Asia; in other months the moisture-laden winds blow from south to north, bringing the famous monsoon rains to the coastlines there. Sailors learned that these winds would carry them from East Africa to Arabia, and to the West Coast of India, with similar patterns in the eastern Indian Ocean. This paper will focus on the oceanic trade routes of ancient Indian subcontinent with Arabia and East Africa on the west and South East Asia on the east.

II. EVIDENCES FROM THE PAGES OF HISTORY

The Indian Ocean system developed out of the gradual integration of earlier regional networks. By 3000 B.C., travelers in small canoes and rafts moved between towns and trading ports along coastlines from Arabia to the Indian subcontinent. By 2000 B.C., millet and sorghum — grains imported from the East African coast — were part of the cuisine of the Harappan civilization, which stretched across today's Pakistan and northern India. Archaeological evidence and genetic studies suggest that the first major settlement of Madagascar came not from Africa — a short hop across the Mozambique Channel — but from Indonesia, 4,000 miles away. During its peak, the trade network connected places as far-flung as China, Rome and southern African kingdoms such as Great Zimbabwe. In terms of the sheer amount of goods moved, the maritime trading system rivaled its more famous inland relative, the Silk Road. In the classical era, major empires involved in the Indian Ocean trade included the Mauryan Empire in India, the Han Dynasty in China, the Achaemenid Empire in Persia, and the Roman Empire in the Mediterranean. Silk from China graced Roman aristocrats, Roman coins mingled in Indian treasuries, and Persian jewels show up in Mauryan settings.

The main source of information is the first-century Greek manuscript, The Periplus of the Erythraean Sea, which recorded trading depots and ports' locations, goods and populations with enough accuracy that researchers today are able to match archaeological sites with the text's descriptions. For example, using the text, one team has determined a site in present-day Eritrea was Adulis, an important city in the early Christian empire of Aksum. For more than a millennium, farmers, shepherds and merchants went there from surrounding villages to exchange raw materials such as ivory, salt and animal skins for Persian glassware, Arabian spices and other exotic products. Archaeologists today regularly recover small items like glass beads, spindle whorls or Chinese porcelain at sites across Africa and the Mediterranean.

The Anonymous author has left a detailed account of his numerous trading voyages to and from India and all the goods imported to India and the commodities exported from India.

"Beyond these places, in a bay at the foot of the left side of this gulf (Red Sea), there is a place by the shore called Muza (port on the Red Sea), a market-town established by law, distant altogether from (Red Sea port town of) Berenice for those sailing southward, about twelve thousand stadia. And the whole of Muza is crowded with Arab ship-owners and seafaring men, and is busy with the affairs of commerce; for they carry on a trade with the far-side coast and with Barygaza (modern Indian city of Bharuch), sending their own ships there." Anonymous, The Navigation of the Erythraean Sea 21

"….just beyond the cape projecting from this bay there is another market-town by the shore, Cana (trading port in Yemen)…the Frankincense Country….All the frankincense produced in the country is brought by camels to that place to be stored, and to Cana on rafts held up by inflated skins after the manner of the country, and in boats. And this place has a trade also with the far-side ports, with Barygaza (India) and Scythia (Iran) and Ommana (Oman) and the neighboring coast of Persia." Ibid. 27

"Trade is also carried on there by some people from Muza (mercantile port on Red Sea) and by those who chance to call there on the voyage from Damirica (on the Malabar coast of India)…they bring in (from India) rice and wheat and Indian cloth, and a few female slaves; and they take (from India to Europe) for their exchange cargoes a great quantity of tortoise-shell. Ibid. 31

"…another market-town of Persia called Ommana. To both of these market-towns large vessels are regularly sent from Barygaza (India), loaded with copper and sandalwood and timbers of teakwood and logs of blackwood and ebony. To Ommana frankincense is also brought from Cana, and from Ommana to Arabia boats sewed together after the fashion of the place….From each of these market-towns, there are exported to Barygaza (India) and also to Arabia, many pearls, but inferior to those of India; purple, clothing after the fashion of the place, wine, a great quantity of dates, gold and slaves." Ibid. 36

"This gulf is very narrow to Barygaza and very hard to navigate for those coming from the ocean;… Because of this, native fishermen in the King's service, stationed at the very entrance in well-manned large boats go up the coast as far as Syrastrene (modern Saurashtra), from which they pilot vessels to Barygaza." Ibid. 43-44

"This whole voyage (to India) …from Cana and Eudaemon Arabia, they used to make in small vessels, sailing close around the shores of the gulfs; and Hippalus was the pilot who by observing the location of the ports and the conditions of the sea, first discovered how to lay his course straight across the (Indian) ocean. For at the same time when with us the Etesian winds are blowing, on the shores of India the wind sets in from the ocean, and this southwest wind is called Hippalus, from the name of him who first discovered the passage across (the Indian Ocean). From that time to the present day ships start, some direct from Cana, and some from the Cape of Spices (Somalia); and those bound for Damirica (Indian port) throw the ship's head considerably off the wind; while those bound for Barygaza and Scythia keep along shore not more than three days and for the rest of the time hold the same course straight out to sea from that region, with a favorable wind, quite away from the land, and so sail outside past the aforesaid gulfs." The Navigation of the Erythraean Sea 57

III. CREATING REVOLUTION IN THE OCEAN TRADE: THE MONSOON WINDS

Sometime before 100 B.C., Greek sailors coming from Egypt discovered a shortcut to India. Much easier and more direct than the arduous overland route, or than hugging the deserted coastlines of Arabia and Persia for 5,000 miles, this route took only weeks to travel. Sailing straight out into the open waters of the Arabian Sea during the late spring, ships were whisked by the monsoon winds on a steady northeast course, arriving on India's west coast by mid-summer. It was a daring feat for those first sailors who attempted it. Fortunately for those first crews who made the attempt, they were saved by one of the great forces of nature: the monsoon.

The monsoon is a seasonal wind that reverses direction twice a year. Starting in June, the Indian subcontinent heats up, creating a low-pressure system that draws cool, moist air from the southwest. This produces a wind that blows steadily through the summer months and brings the rains that sustain India's agriculture. As the landmass cools off through the autumn, the cycle reverses itself. From October to November, cool, dry air is drawn from the Himalayas and blow southeast across the Arabian Sea towards Africa. This allowed merchants from the west to make a round-trip journey to India within a single year. The same cycle operated over the Bay of Bengal to India's east, ferrying traders to and from the islands of Southeast Asia.

During the period from November to February, the monsoon winds blowing from the Northeast helped the ships to sailfrom the east coast of India to Sri Lanka and other Southeast Asian countries. Similarly from June to September, the Southwest monsoon wind blowing from southwest naturally helped a ship to return from Southeast Asian countries via Sri Lanka to Tamil Nadu, Andhra, Odisha and Bengal.

Mariners of east coast were aware that it was a risk to sail between May and July–August in the Bay of Bengal particularly on a southward voyage. At the outset of Northeast monsoon from the month of October–November it is safe for southward voyage. It is also possible to take more easterly route through central Bay as far as Andaman in the month of December. Sailing in February and March from Andhra coast through the Andaman or more southerly route through the 10° degree channel is preferred. Between November and April it is safer to run close to Nicobar than to sail for Southeast Asian countries.

IV. TECHNOLOGICAL ADVANCEMENT IN MARITIME TRANSPORTATION

All these developments were connected with and stimulated by advances in maritime transportation. In the domain of shipbuilding, insular Southeast Asians made significant contributions to the rich tradition of maritime transport that shaped the history of the Indian Ocean and connected its coasts and shores. It has long been argued that outrigger boats with sails hoisted from sprit spars have evolved in the waters of

Southeast Asia and spread across the Indian Ocean as a result of interethnic contact, perhaps concomitant with the settlement of Madagascar. In addition, it is plausible that larger commercial Indian Ocean vessels, constructed of edge-dowelled planks, also hail from insular Southeast Asia. Archaeological and historical data suggest that these ship types played an important role in the ancient commercial activities in the South China Sea and the Bay of Bengal. In both seas, it seems that local nautical traditions have inspired, influenced, and enriched each other. Such widespread ship types as the "junk", "sampan" and "parao" of early European accounts attest to this trans-regional hybridity.

The concept of trade in ancient India was quite different from modern times. The seafarers of India had the knowledge of the sea pertaining to wind, currents, tides, weather conditions and shipbuilding since the 3rd millennium BC. The geographical setting of Indian Peninsula with the innumerable rivers and their distributaries has supported navigation and the development of seaports all along the estuarine mouths, from the early times. The origin of lagoons, lakes and other sheltered bodies along the Indian coast also favoured the development of many ports, provided sheltered anchorages and facilitated the plying of various types of boats.

In addition to the geographical considerations in location of ports, maritime structures such as boatbuilding yards, landing places, boat shelters, causeways, wharves, jetties, breakwaters and moorings on the sea front also played a vital role in the maritime activities of the country. The excavations along the coast of India have brought to light the remains of docks, wharfs, jetties, warehouses and lighthouses. It seems that every seaport had some kind of a dock and wharf for handling cargo and ships anchorage. Although only some of them have been located and excavated and there are many others, which might have been destroyed, submerged or buried and need a comprehensive research to locate them.

V. OCEANIC TRADE ROUTES CONNECTING CONTINENTS

Trading with East Africa

Navigation in the Indian Ocean was pioneered by the Arabs, and they were the dominant element throughout history, as, so far as sailing ships in the western part of the basin are concerned. East African coastal cities participated in a larger Afro-Asian trade network a thousand years before Vasco Da Gama peeked around the Cape of Good Hope to find the way to sail to India. Gujarati traders were already criss-crossing the ocean for biashara with the Swahili Coast of Eastern Africa. As far back as the 3rd c. CE, the banana, domesticated in India, came to Madagascar (and thence to the African continent) as part of the broad Afro-Asian/Indian Ocean trading community. By the 13th Century, Africa was well integrated in the global trading pattern.The Swahili Coast is the best known of these multicultural trading societies. The Coast of East Africa has had a long history of trade, involving constant exchanges of ideas, style and commodities for well over two thousand years. Marriage between women of Africa and men of the East created and cemented a rich Swahili culture, fusing urban and agricultural communities, rich in architecture, textiles, and food, as well as purchasing power.

It is more than probable that a good deal of the African trade, such as it was, which found its way to Tyre and Syria was carried on by Indian merchants who had their houses of agency at African ports. The Periplusmentions several East African places that traded with India. The ruling power at these ports was generally in the hands of foreigners of Arab or Persian extraction, and all trade was monopolized by Indians or Arabs with Indian connections, and having their homes or chief places of business sometimes on the Egyptian, Arabian or Persian coast, but more often in India, at Tatta in Sind, Mandavie in Cutch, the ports of Kathiawar or the Gulf of Cambay, Surat, Calicut and other ports on the Malabar coast.

Merchants from Africa, Persia, India, and Southeast Asia, were able to count on the dependable monsoon wind to carry them on a round-trip journey every year. Most often they sailed in small boats such as the famous dhow that contained no iron nails, but were sewn together with various plant fibers. Despite traveling in these flimsy craft, mariners could use the steady and swift winds to traverse the ocean's breadth in about the same time it took to sail the length of the Mediterranean, which was half the distance.

However, traders would not travel farther than a monsoon's trip from their home port. Greeks and Arabs ventured as far as western India; Indians ranged between the mouth of the Red Sea and the Malay Archipelago; Chinese and Southeast Asian merchants went as far as Sri Lanka. Ethiopians trading gold and ivory, Malays trading pepper and nutmeg, Yemenis trading frankincense and myrrh–all would mingle in trade towns and ports scattered across the ocean, negotiating the transshipment of their precious cargo in some common trade tongue. Thus the silk that reached ancient Rome, or the spices that reached Europe before the age of colonization, would be handled by a multitude of merchants during a journey that could last years.

It is probable that both thePersians and Greeks gained their knowledge of navigation from the Arabs;the Persians did not undertake long-distance voyages

until the fifth centuryB.c. and the Greeks not until Hellenistic times. The ports of O m a n and the Persian Gulf were, except for shortperiods, the most important for the eastern trade, though at times most ofthe trade passed through the ports of southern Arabia, especially Aden, andin the time of the Periplusof the Erythraean Sea in the first centuries A . D .Mocha was the most important. The first ports to be developed on the East African coast, as we knowfrom the Periplusand Ptolemy, were on what is now the Somali coast, andat Rhapta, the most likely site for which is in the delta of the Rufiji river(8° S.). This position corresponds roughly to the limit to which ships maysail on the north-eastern monsoon, and be certain of returning on the southwesternlater in the year.

The goods sought for export to the countries of the Middle and FarEast were the natural products of Africa. Of these, there is no doubt thatthroughout history ivory has been the most important. A further commoditythat was probably of importance was iron, the only manufacturedproduct mentioned by our sources. Its importance is supported by thefinding of plentiful remains of iron smelting at Manda. We are told by one source that East African iron was exportedto India for the manufacture of the famous swords made there.

Trading with Arabia

With the conquestof Egypt and Persia by the Arabs in the seventh century, both thesea and land routes came under their control. This Arab navigation wasentirely independent of the earlier Graeco-Arabian trade. Henceforth theArabs held a complete monopoly in the overseas trade between the Eastand the West, and India resigned herself to accepting seafarers as middlemenfor carrying her wares. The conquest of Sind soon after 710 gave Arabs theuse of the valuable ports of Al-Daybul and Al-Mansurah and brought thema stage nearer to the Far East and China. The sea route from the PersianGulf to Canton was the longest in regular use by the Arabs. They amassedenormous profits by carrying articles such as Indian textiles and piece-goods,Persian and Arabian horses, gold and ivory from East Africa as well asspices from Indonesia, Ceylon and Malabar and Chinese silks across theIndian Ocean and China seas.

Indian cultural influence seems to have been sporadic and diffuse inthis period. The Neoplatonists of Alexandria and the Sufis of Arabia seemto have listened to the voice of Hindu mysticism but rather as individualsthan as leaders of popular movements. Arabs acquired from India someknowledge of Indian philosophy, medicine, mathematics, astronomy andfolklore and carried it not only to their own land but also to Europe.

It has been observed how spices and silks, which were the characteristicexports of the Orient, could reach the European markets for several centuriesonly through the Arabs. Indeed some of the ancientcities and ports all along the Indian Ocean seaboard rose to affluence andpower only because either they were directly participating in the easterntrade or thus occupied strategic positions on the trade routes along whichthe produce of the East was transported. Vasco da Gama's epic voyage of discovery of the allsearoute to India via the Cape of Good Hope was a feat of great significance inasmuch as it broke the monopoly of Arab trade and channeled the streamof eastern trade towards European seaboards.

Trading with South-East Asia

Several decisive developments in the history of south east asia took place in the maritime instead of terrestrial sphere, where ideas about agriculture, metallurgy, urbanization, maritime technology, and religion were able to spread faster than they could ever have done overland. Indeed, such developments as urbanization, metallurgy, and the expansion of religions took place almost simultaneously in several parts of the Indian Ocean World, following very similar patterns across the regions in contact. Consequently, commodities, concepts, and people moved from South to Southeast Asia and beyond, but also in the opposite direction.The communities inhabiting insular Southeast Asia – that is to say, the islands that nowadays encompass Indonesia, Malaysia, the Philippines, Singapore, Brunei Darussalam, and East Timor – were actively involved in the ancient interregional trade networks that have shaped the Indian Ocean into what it is today.

The research is supported by the findings from the stratigraphical evidence of Anuradhapura excavation, which shows that Brahmi script was introduced in Sri Lanka by the traders of India, probably in 5th–4th century BC, much before the introduction of Buddhism by Emperor Asoka. In addition to the Kharoshti-Brahmi and Kharoshti inscriptions, explorations at the temple Museum of WatKhlong Thom in Thailand has brought to light an inscribed small flat touchstone with eight letters of Tamil-Brahmi inscription datable to the early historical period (3rd–4th centuries AD).Ceramic evidence is the best example to draw the outline of contacts between the people and routes followed by them. Different types of earthen ware were transported in boats and ships for maritime trade. The finding of varieties of ceramic such as Northern Black Polished ware (NBPW), Rouletted ware (RW), Knobbed ware (KW), Russet Coated Painted ware (RCP) and Red Polished ware (RPW) at ports, trade centres and hinterland sites suggest the existence of overseas trade role of ceramic in the maritime trade.

The mercantile exchange between the ports of India and Southeast Asia can further be corroborated with the finding of numerous other Indian artefacts for

instance, semiprecious stone beads, glass beads, etc. discovered from the excavations at Sembiran. The particular types of red glass bead which were known as mutisalah were found in north-eastern Bali and other regions of Southeast Asia and these beads are more common in the excavations of Arikamedu.

Several loanwords from Malayo-Polynesian languages are found in the languages of the Nicobar Islands, India, Sri Lanka, East Africa and, possibly, the Andaman Islands. These borrowings encompass the domains of maritime technology, agriculture, spices, and other trade commodities. A close examination of the words used for these commodities often reveals the identity of the ethno-linguistic communities involved in their dispersal, something that cannot be determined by solely relying on archaeological data. For example, the Malay language was by far the most influential means of communication in Southeast Asia – as it is today – and many cultural items were disseminated through Malay-speaking people.In particular, contact with South Asia, China, and other regions enabled the early Malay polities to gain substantial economical surpluses, manufacture better ships, improve technological practices, and to establish efficiently structured trade oriented states.

Against the backdrop of these early trans-regional networks, an important set of trees and other plants is believed to have been introduced from Southeast Asia to India in ancient times and from there to the Middle East, East Africa, and Europe. Examples include sandalwood, the areca palm, betel pepper, banana, citrus cultivars, ginger, and galangal. These plants changed both the agricultural and socio-cultural landscapes of the Indian Ocean World. The lucrative spice trade, too, featured active Southeast Asian participants. Several popular spices and aromatics, such as cloves, nutmeg, and Sumatran camphorwere produced exclusively in relatively isolated regions of present-day Indonesia.

Textile features significantly in the overseas trade of India and the earliest written accounts corroborate this statement. A wide range of coarse to fine cotton textiles, silks, painted and printed cottons, carpets, cushions were traded in vast quantities to Southeast Asia in exchange for spices and aromatics. Even fine Bengali muslin (praised as ‘woven air’) was in great demand in the Roman world and other regions. Periplus has mentioned the best quality of cotton clothing was produced in the Gangetic country. Moreover, the ‘door-knob’ spindle whorls with traces of iron remaining inside the central perforations of ThaKae, central Thailand are similar to Kodumanal, Tamil Nadu; probably this shows the transfer of technology from India to Thailand along with fibre and iron during the early centuries of the Christian era.

The other items that were exported to Southeast Asia include varieties of glass, etched agate and carnelian beads, shell bangles, wasters, RW and Roman products. Even, pearls, gems, ivory, ivory products, dyes, ornaments, metals, plants and forest products were the items of trade. It is believed that sandal, aromatic wood, spices, cloves, tin, were imported to India. The spice trade was responsible for the Indianization of the whole of Southeast Asia, among the trade cloves and pepper was significant. Even cinnamon and cassia were brought from the mainland of Southeast Asia and China and sandalwood from Eastern Indonesia.

Coedes has proposed two probable overseas routes to Southeast Asia from the Indian subcontinent. The first route could start from south India either through the 10° channel crossing Andaman and Nicobar Islands leading to Takuapa in Thailand or south of 10° channel crossing Nicobar Islands heading towards the headland of Aceh and reaching Kedah in Malaysia. From these places mariners sailed to other regions of Southeast Asia. In the second route ships could be sailing along the coast of Martaban and Tavoy in Burma from there on caravan route crossing the three Pogoda and other passes reaching the Menam Chao Phraya delta by way of Kanchanaburi and Ratchaburi.

There were regular coastal voyages from the mouth of the River Ganges to Sri Lanka. The ports of embarkation were Tamralipti, Palur, Kalingapatnam, Dharanikota, Masulipatnam, Arikamedu, Poompuhar and Sopatma from where ships sailed a more southerly course to the north end of Sri Lanka then they crossed the Bay of Bengal into the 10° degree channel aided by favourable wind and currents. Afterwards they sailed towards the east of Sumatra and reached Java, Bali Island and other Southeast Asian countries by crossing Malacca Strait. Ships set sail to Bali, Java and Sumatra from the ports of the east coast of India and on return they sailed directly to Sri Lanka then to other ports of India. The merchants first went to Sri Lanka then to Southeast Asian countries and returned through the same route because of direction of flow of wind and currents during their journey.

In earlier days trade was not only confined to exchange of goods but along with trade other non-material aspects such as language, script, philosophy, food habits, human behaviour, attitude, etc were spread on the foreign soil. Traders and monks also played a great role in introducing Indian script, language, art and culture to foreign lands. Scholars are of the opinion that the liberal principles of Buddhism, development of shipping technology, state control of trade, industry and agriculture were equally accountable for the beginning of maritime trade between India and Southeast Asia.

VI. CONCLUSION

The trade contacts of India with the other trading continents contributed to the growth of socio-economic conditions of all the regions. For example, Indian art, culture and religion spread over Southeast Asia and in a later period local king's embraced Indian religion and constructed Hindu and Buddhist religious complexes. Even Indian writing such as Brahmi and Kharoshti and languages like Sanskrit and Prakrit were patronised by the kings and people of Southeast Asia. In addition to this, other Indian influences can also be noticed in Southeast Asia.Indian Ocean trade never truly disappeared. Beginning in the 15th century, however, with the expansion of European exploration and China's withdrawal from international affairs, the world's economic focus shifted westward.

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