ON THE

ANCIENT COMMERCE OF INDIA.

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On the

Ancient Commerce of India.

A LECTURE DELIVERED

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PREFACE.

THE Lecture on the Ancient Commerce of India was delivered two years ago at the Government Central Museum in Madras. It has been printed at the desire of friends. It does not claim originality so far as facts are concerned, but it aims at containing in a small compass the most important points connected with the ancient Indian trade, in a manner in which they have not been collected before. The lecture is printed as it was delivered.

GUSTAV OPPERT.

21*st December* 1878.

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THE commerce of every country, especially the commerce of a country so ancient, so cultivated and so renowned as India is, possesses not only an intrinsic political economic interest, but is also of considerable geographical and ethnological importance. By examining the commercial records of a nation we begin to become more intimately acquainted with the real inner life of the nation, than by merely studying its external political history with its wars and treaties. The commencement of civilization indeed is the starting point of trade. New and until then unknown wants are first felt and require to be gratified. This desire can only be realized by exchange of articles belonging either to persons of the same community or to different tribes or nations. The demand for an article creates its supply; the more intense becomes this demand, the more refined the taste; the greater the quantity the better the quality of the object in question. To promote intercourse between nations and to provide for the transmission of goods, roads on land and on sea need to be discovered or constructed, and for the conveyance of men, and their chattels vehicles and ships must be built. Thus in supplying the requisite necessaries of life and improving the desired commodities, the human mind becomes inventive. Art and science follow the track of trade.

It is my intention to give you only a few rude outlines of Indian commerce in general; the subject is too large, too intricate, and too difficult to be dealt with, to allow here of a detailed and circumstantial description. Besides this, the material for a complete survey of the commercial relations of India has not yet been gathered, and I am afraid, will never be satisfactorily collected, not only because much of the past is irretrievably lost and will remain for ever wrapped in darkness, but, also because the Hindus, though well aware of the profitable nature of commerce, have not committed, and as a rule do not commit, the history of their commercial pursuits to posterity. Except a few occasional allusions, here and there, in different works, Indian literature keeps silence on this subject, and were it not for the writings of foreigners, or for the remains of olden times, which have survived and been preserved, our knowledge would be more limited still. Eminent scholars have done much to throw light on this important, but very obscure matter, and my revered teacher, the greatest Indian Archæologist of our day, the late Professor Lassen, of Bonn, has striven hard to explain many prominent occult points.

Before beginning to discourse on the commerce of India, I must draw your attention to the fact that, long before the Aryans came to India, that great race which is generally described as and known under the name of Turanian, had founded empires throughout the old world. The home of the Turanians is assumed to have been the country round Lake Aral. Thence they spread over the greatest part of Asia, reigning there paramount for at least 1500 years.

It is established now, beyond any doubt, through the decipherment of the cuneiform inscriptions, that the Turanian empires had advanced to a high degree of culture. This civilization, though tainted with strange materialism, proved itself nevertheless able to develop to a high degree of perfection certain branches of art and of science. To these Turanians

who differed much among each other in idiom belong also the Dravidians of India of our days, who in those times occupied Ariana and Persia. In Europe, these Turanians appear to be represented by the Esthonians, and in many places of Western and Central Asia, they form the substratum of the population, while they supplied in China the ground work of the civilization of the Celestial Empire.

A branch of the descendants ascribed to Ham, emigrated early from Asia to Africa and founded the Empire of Egypt, while others, remaining in their native continent, established there famous kingdoms. In the plains of Shinar there lived together and became amalgamated to a mixed population, the Shumir and Akkad. Shumir is the ancient name of Assyria and the Shumir were the inventors of the cuneiform character. The *old Mesopotamian sovereigns called themselves Kings of* Shumir and Akkad. The Shumir had originally settled in the north, while the Akkad lived more in the south, their country being washed by the waters of the Persian Gulf. Their name is mentioned in Genesis x, 10. "And the beginning of his (Nimrod) kingdom was Babel and Erech, and Akkad and Kalneh in the land of Shinar." They were the neighbours of those Kushites, who dwelt along the seashore, and whose abodes extended from the Straits of Babel Mandeb to Malabar. The Akkad were the first, as far as historical evidence goes back, to navigate the Persian Gulf and the Indian Ocean. The coast of the Persian Gulf was also the ancient home of the Kanaanites, a part of whom became celebrated in after-time under the name of Phœnicians. The shores of Arabia, Persia, Beluchistan and Western India were thus at an early period inhabited by industrious and enterprising nations, some of whom, as the Akkadians, and more so still the Phœnicians, became famous sea-faring people.

About 2500 years after the Egyptain empire had been established, *i.e.*, 2500 B.C., and after the Akkadian dynasty

had reigned for a long period in Babylon the Aryans invaded Chaldaea, and pressing at the same time on the Kanaanites of the Persian Gulf and the Dravidians in Persia, drove the former towards the North-West and the latter to the South-East to India. By degrees the Aryan invaders settled in the conquered country but the history of their conquest, of their establishment, and of their national adventures, is up to now a sealed book, while we are well informed of contemporary and previous Egyptian and Babylonian history.

The Aryan immigration to India proceeded slowly, the new comers had most probably to overcome the spirited resistance of the old inhabitants. They did not go beyond the frontiers of the Punjab till the fifteenth century before Christ, the Brahmanic influence spread gradually to the South, the Buddhist and Jain immigrants most likely preceding the Brahmans, whose arrival there it is difficult to fix in the absence of historical evidence. But when we hear of the early Indian trade, especially that from and to the Southern Peninsula, the Deccan, we may assume this commerce to have been carried on rather by non-Aryan than by Aryan Hindus.

In a discussion on commerce the roads assuredly claim the first attention, as on them the traffic takes place. As the roads on land are generally along the beaten paths of nature, and these are not materially changed in historical times, we may take it for granted, that as a rule, the great high roads of yore are also the high roads of to-day. New roads may be opened, old ones may fall into disuse and be closed, but, as formerly art was not thus at the disposal of industry and mployed in opening tunnels through mountain ranges or nder the surface of the earth, the most important changes specting the direction and the use of roads were rather due to olitical complications than to other reasons.

In the second book of the Rāmāyaṇa, we find mentioned, a road leading from Ayodhya, the modern Oudh, to Rājagṛiha,

the capital of the Kekayas, situated in the neighbourhood of the Himālaya mountains, near the upper Vipāśā, the Hyphasis of the Greek, and the modern Bias. This highway passed through Hastināpura, the famous residence of the Kurus. Greek and Roman writers furnish us with most valuable information respecting the more frequented roads. We know through Plinius that Alexander the Great employed surveyors to measure the Indian roads. One road went from Pushkalāvatī (Peukelaotis) near Attok through Takshaśilā, Bukephala, and crossing the Hyphasis to Pāṭaliputra (Patna). We owe a description of this highway to Megasthenes, who resided 295 B.C. as the Ambassador of Seleukos at the last-mentioned place, the residence of Candragupta. Particulars of the distance from Patna to the sea Megasthenes received through sailors. Another road went from Pushkalāvatī to Indraprastha (Delhi), and then to Ujjayinī (Ujain). Thence over the mountain ranges of the Vindhya crossing the rivers Nerbudda and Tapty to Pratishṭhāna and further into the Dekkan. Near the modern Aurungabad a road turned towards the north-west to the emporiums of Barygaza (Barok) and Kambaya (Kambay). These and many other highways, all which it were too long to mention, crossed the country, connecting distant places with each other, while a good deal of traffic followed the course of the rivers, as we know of the Indus, the Ganges, the Godavery, Kavery and others. The roads were kept in good repair and order, as it is certain that the ancient Hindus were well acquainted with the art of road-making. The Rāmāyaṇa provides us with a pertinent description. Bushes and trees, which obstructed the way were first cut down, and the ground then levelled. Impeding rocks were pierced, and rivers bridged over. To conduct superfluous water from watery places canals were built, and in waterless tracts wells were dug. The inscriptions of the good and wise king Aśoka show us the special care he took to insure the welfare of travellers. Fig trees and mango

trees skirted the King's road, wells were found at every mile's distance, and resting places were provided not only for men but even for beasts, as Aśoka, according to his Buddhistic tenets, took care also of the dumb animals.

Along the coast of India were situated port towns, into which flowed the export products of India, as well as the import articles of foreign countries. The most important were, Sindhu, the Naustathmos of the Greek, our Karaci, Barbarikon, Barake, Minnagara (Ahmedpur) in Guzerat, Barygaza (Barok), Suppara (Śūrpāraka, Sibor) on the Tapty near Surat, Kalliāna (Kalyāṇī), Naura (Honavera), Mangaruth (Mangalore), Muziris (Muyiri Kotta or Kranganore), Tyndis (Tundi), Nilkylda (Kallada) recognized as such by my learned friend Dr. Burnell, whose researches on the ancient topography of India have led to so successful results, Balita (Kalikut), Kollum (Quilon) and Kumārī (Komorin) on the Western Coast. The Eastern shore not being so favorably situated for commerce, as it was the off-coast for the Western nations and not enjoying the advantages which Ceylon afforded to the East, was less known and frequented, and consequently contained a smaller number of large sea towns. It possessed, moreover, very few good natural harbours, only Korkhi (Kolchi), Kayal, the Cael of Marco Polo in the Gulf of Manaar: Kabir on the mouth of the Kavery, Poduke (Pulikat) and Palura (Naupura) can be identified with tolerable certainty, while the position of Kamara and Sopatma mentioned by Ptolemy, and of Maralla found in the Christian Topography of Kosmas Indikopleustes is not yet fixed. The island of Ceylon (Laṅkā, Taprobane) formed the centre of the Western and Eastern commerce.

We glean from the old lawbooks of Manu and Yajñavalkya that the home or inland trade in India was very considerable. Merchants travelled over the length and breadth of the land, and became by an arduous application to their business well acquainted with the manners, customs and dialects of the

country, thus getting more able to estimate the value and the market prices of merchandise. The existence of trading companies, which is attested by Yajñavalkya, bears witness to a highly developed state of civilization, the more remarkable, as such societies were constituted *according to legal prescription*. The State superintended even the transmission of *goods, settling according to a strict scale the amount of freight.* The interference of Government went even further, for the prime costs and selling prices of wares were fixed by the authorities, and dues and taxes were levied to the discontent of rate-payers in olden times as well as now-a-days. The Indian kings are said to have paid much attention to the use of proper weights and measures, by ordering an examination and adjustment of them every six months, and punishing severely whoever was convicted of using false measures, or weights. The Hindus became acquainted with the art of coining from the Greeks, and we find that they used previously as money, pieces of gold, silver or copper, which were stamped with a certain mark; this explains the fact why in the law-books fines were fixed according to weight. Such small pieces of silver, marked with the sign of the sun, the moon or a star, are even now here and there found and prove their antiquity by their rude workmanship, while the name of such gold, silver and copper pieces themselves, as *suvarṇa, nishka, māsha, raktikā* and *kārshāpaṇa,* are evidences of their age. In Manu's code the former are prevalent, while in Yajñavalkya real coins (Nāṇaka) are mentioned, yea even the office of an assayer of the mint is specially recorded.

If we may believe the Indian law codes, the position of a merchant was regarded to be a very respectable one. They were acknowledged as belonging to the third caste, the Vaiśya, who originally shepherds and husbandmen, had in more refined times devoted themselves to trade. To enhance, moreover, the social position of a merchant, he was regarded as originally the son of a Kshatriya by a Vaiśya woman.

But it is only in comparatively later times, that the merchants formed a peculiar caste. Manu and Yajñavalkya still allow Brahmans and Kshatriyas to resort to trade, when in distressed circumstances. The word Baṇij denotes in both codes a merchant, from it is derived the modern expression Banyan. The merchants who attended fairs or markets were called Naigamas, from nigama, fair; and Māgadha for commercial traveller seems to point to the travelling propensities of the inhabitants of Magadha (South Behar).

The Non-aryan inhabitants of the Western Coast of India were, as we have seen before, seafaring people; but we have the authority of the Ṛigveda to show, that also the Aryan Hindus were acquainted with the sea; for in one hymn the Aśvins are praised for having on the immense and bottomless ocean protected and safely conducted to the shore the hundred-oared ship of Bhujyu. The Rāmāyaṇa informs us that merchants travelled together in large caravans to the seashore and embarked there for foreign countries. We know of one voyage undertaken by 500 Hindu merchants, who, according to their custom, took with them one Saṅgharakshita to teach and interpret the law while on the voyage. Commercial intercourse by sea took place as well towards the West as towards the East. Even if we were not informed of the Indian trade to the Persian Gulf, Arabia and Africa, such a name as Socotra the Sanskṛit Dvīpa Sukhatara, the Dioskorides of the Greek, would be evidence of it. The Ceylonese traffic was very considerable, thence elephants were exported to Kaliṅga, and voyages undertaken to the mouth of the Ganges. Plinius informs us that voyages to the Prasians which had formerly lasted twenty days, were afterwards made in six days only. From a harbour near the present Kaliṅgapatam, vessels crossed in the time of Ptolemy the Bay of Bengal and reached Sada in Arakan, south of the island of Ramri.

From Ceylon large ships went to Chryse, the modern peninsula Malacca, where lay the Indian colony Kokkonagra; thence to Sindhu in Siam, to Aganagara in Kamboja and to China, where the names of Bramma, the modern Seminfu, and of Ambastes, the river Ngan-nan-kiang near Kanton indicate Hindu origin. The islands of Java and of Bali were colonized by Indian settlers, and the Greek traveller, Iambulos, whose observations were used by Diodoros Sikulos, corroborates this fact.

The ships employed on these voyages were large, had two prows and could hold 3000 amphoras. They were built of papyrus, like the ships on the Nile, the ropes were manufactured from the coco palm and the sails from the hemp, which grew in Ceylon. This vigorous display of the Indian trade is no doubt closely connected with the spread of Buddhism which instilled for a time fresh energy into the population.

Having thus far commented on the commerce carried on by the Hindus, our attention will now be directed towards those nations who traded with India. As India through its climatic position and its natural condition, *i.e.*, by the peculiar distribution of fertile level, plateau and mountainous land, produces much, which cannot be produced in other countries, and is moreover not dependent upon others, it became rather a commercial centre, a sort of entrepot, than a real trading country. Its intercourse with the neighbouring nations, depended on its own natural frontiers. These were the sea for the southern peninsula, the Dekkan; Burmah on the East, the Himālaya mountains on the North, and Beluchistan and Afghanistan on the West. Burmah and the south of China are very rich countries, but their inhabitants have never shown great signs of civilization or proved themselves able to use the immense treasures so prodigally bestowed on them. The mountain passes along the Burmo-Chinese frontier are

still occupied by uncultivated savages and the recent murder of Mr. Margary proves that the internal state of the country is still not favorable to peaceful commercial enterprise. Though China is only separated from Assam by a mountain range, and can also be reached by a detour to Bhamo on the Irawady, we have no authority to state, that this road was ever used in ancient times. Chinese Emperors tried afterwards, now and then, to open communications between India and Southern China, but these efforts proved only temporarily successful. The frontier on the north is the highest mountain range on the surface of the earth and the country immediately lying beyond it, Tibet, is neither very fertile nor varied in its productions. The Himālaya mountains do not absolutely prevent all intercourse with India, but their passes have been rather more frequented by pious pilgrims, than by enterprising merchants. In Kabulistan on the contrary meet together the roads from the most distant West with those of the remote East.

Three roads led from China to India, the first went from the mountain pass of Yumen on the north-western frontier of China between the Nanshan and Sining ranges in the valley of the Hoangho, *vid* Tibet to Pāṭaliputra. The second called Nanlu or South road lay in the south of the Tianshan mountains, it also started from Yumen, went along the Kokonor, through the desert of Gobi, by the Lop Nor, crossed the Tarim river, and remaining on its north side, touched the towns of Kutche, Yarkand and Kashgar, surmounted the Belurtag, and following the Yaxartes (Syr), then bent towards the south towards Bactria (Balkh). The third road commences also at Yumen, inclined then towards the north, therefore called the Pelu or Northern Road, reaches Hami or Khamil, after crossing the Great Desert, goes through Karachar and Turfan, passed the Tianshan, and remaining on its northern side, touches Umritsir, (Bishbalik) and arrives at Guldja or Ili. The way over Yarkand and Kashgar was well

known to Ptolemy. From Bactria (Balkh) Kabul is easily reached. Many roads led from the Hindu Kush to Kabul (Kabura, the Ortospana of the Ancients) though three are only specially known. The road from Kabul to Kandahar passed through Ghazna. At Kandahar (Alexandria Arachosiorum) the high road left the Paropanisos and turned to Herat (Alexandria Ariorum). Herat and Balkh were connected by a separate road. From Herat the road wound through Kherasan (Margiana) and passing its capital Alexandria, (afterwards called Antiochia) reached Hekatompylon, the most important town of the Parthians, thence through the Caspian gates to Ekbatana in Media and crossing the passes of the Zagros arrived at Holvan. At this place three roads branched off, the southern went to Susa, the south-western to Babylon and thence over Palmyra, (Tadmor,) to Tyros and the northern ended at Sardes. There was also from Kabul and Balkh another passage along the Oxus through Khiva to the Caspian sea, thence after 5 days' overland travel to the mouth of the Phasis, where the Milesian colonies, Phasis and Dioskurias were situated, and finally over the Black-Sea to Sinope.

From this brief sketch we learn that there existed communication by land as well as by sea between the furthest East of China and the utmost South of India on the one side, the West of Asia, of Africa and of Europe on the other side. Though we are unable to fix the time when the commerce between China and India began, there is no doubt of its antiquity. At first it was in the hands of middlemen. To these belonged the ancient Issedones who delivered the goods of China to the Indian Daradas and to the Turanians in Central Asia. The Aorsi who communicated to the Greek settlers in the Pontus the legends of the one-eyed men and of the gold-watching griffins, acted in a similar manner. In early times Chinese silk was a valuable article, and in the Bible we find allusions to these Chinese traders. Ezekiel (xvi. 13) speaks of raiments of silk in Jerusalem. The name of India itself

is first mentioned in the Chinese annals in the reign of the Emperor Wuti, who, belonging to the dynasty of the Han, reigned from 140 to 86 B.C. The powerful Hiugnu obstructed the road from China to the west, and he sent in 124, his General Tchangkien against them. Although at first unsuccessful, Tchangkien gained at last his object through the assistance of the Usun, and accompanied by ambassadors of this nation, he returned to China. Since then the Chinese themselves became acquainted with the road to Balkh and to India. When the Emperor Wuti was able to annex the previously independent province of Shensi, the above mentioned pass of Yumen became secure, and large caravans travelled now regularly from China to the West. The first Chinese caravan reached Bokhara in 114, and the favorable reception it obtained there, in the country of the Asi, induced the Emperor to despatch caravans also to other countries, *e.g.*, to Tawan or Ferghana. In these days the cultivation of the vine and of a peculiar kind of excellent clover was introduced into China, while in Ferghana and Khoten the breeding of silkworms was inaugurated. In the former country the art of preparing Chinese varnish and of iron founding was moreover learnt. The successors of Wuti followed his example, and extended their empire as well as their commercial system over Asia, the latter up to the Caspian Sea. During the reign of the Wei and Tsin dynasties (204-419) the intercourse between China and India was interrupted, but it revived under the Song Emperors. Wenti who belonged to this race, received in 428 an embassy from Candrapriya, King of Kapilavastu. The travels of the famous Buddhist pilgrim Hiuentsang furnish us with the most important and complete information about the relations between China and India in the 7th century. Having been consecrated a Buddhist priest, 622, he visited many convents, till he started six years later on his great expedition towards the West. Full of enthusiasm for the doctrine of Buddha he desired to listen to the

Gurus in the West, to collect the sacred writings and to refresh his mind by the precious knowledge he hoped to obtain in the country of Buddha's birth concerning the founder of his belief. He travelled through the country of the Uigurs, Songaria, Transoxania, passed Balkh, Bamian and Kabul, stayed for a long time at Attock and traversing India, visited Kañcivaram and then returned to China viâ Kashgar, Yarkand and Khotan. In 645 he reached his fatherland, retired there into a convent in order to translate the numerous Buddhistic writings he had acquired on his travels. He died in 656. Hiuentsang was accompanied by many other pilgrims, and we may infer from this fact, that the roads to India were still used for commercial traffic. Emperor Taitsung despatched an embassy to India between 717 and 720. The conquest of China by the Tatars created at first a change for the worst, but by Central Asia, and China being subjected to one nation the political and commercial relations were otherwise facilitated, as the French and the Papal embassies to China prove, and as I have previously shown in one of my monographs on that subject.[1]

About the early sea trade between India and the Eastern Archipelago and China we have spoken already, but we can also prove, that it was carried on in later times. The Chinese pilgrim Fahien arrived in 411 in Ceylon, stayed there about two years, and embarked on a large vessel, which was provided with a smaller safety boat, for Java. After many disasters he had to encounter, he landed again on the Chinese coast in 414. Kosmas Indikopleustes, who wrote in 547 his Topographia Christiana, gives us an account of the lively trade in aloe, sandalwood, cloves and other products carried on between the Philippines, the Sunda Islands, Kamboja and Burmah on the one part and Ceylon on the

(1) Compare "Der Presbyter Johannes in Sage und Geschichte," second edition, page 4.

other. For a still later period Marco Polo is a trustworthy reporter.

If we turn our eyes from the East to the West, Egypt claims our attention, being one of the countries that were earliest civilized on this globe. Its history goes back as far as 5000 B.C. It is difficult, if not impossible, to prove a direct trade between the old Egyptians and the Hindus, but that a commerical intercourse existed cannot be denied. The Egyptians, though not themselves a seafaring people, had in their relatives, the neighbouring Kushite races, the most famous sailors of the old world, and through their medium kept up their commercial relations. When in consequence of the Aryan advance, to which we have already alluded, the Kanaanites were driven to the West, a part of them entered Egypt, dethroned the kings of the 14th dynasty residing in Xois, the modern Sakha, and founded in 2214 the dynasty of the Hyksos or Shepherd kings. These kings reigned, when Abraham was staying in Egypt. Altogether they ruled in this country for 511 years and during the reign of the last king of this dynasty, Apepi, Joseph came to Egypt. The story of Joseph is moreover a notable evidence of the early caravan trade, which crossing Arabia, carried the merchandise of India to Egypt, Syria and Babylonia. A part of this commerce was then in the hands of the Midianites. By a remarkable coincidence we possess a proclamation of this very king Apepi, containing the title Zaphnath, sustainer of the world, a title given by that king to Joseph (Gen. xli, 45). After the expulsion of the Hyksos, which took place at the beginning of the 18th century B.C., (1703), indigenous sovereigns once more ruled the country of the Nile and great kings like Amosis, Tuthmosis, Amenophis, Sesostris (Ramses) carried the glory and the arms of the Egyptians far beyond the boundaries of their fatherland, but not so far as the legends want to make us believe; Media, Persia, Bactria and India were never invaded

by Ramses II., the Sesostris of the Greek. Nevertheless, we may safely surmise, even if there were no evidence forthcoming, that in those days a brisk commerce united the different and distant nations. In the tombs dating from the time of the 18th dynasty, which ended in 1462 B.C., there are said to have been found mummies wrapt up in Indian muslins and containing vases of Chinese porcelain. Moreover the old Egyptians used indigo for dyeing purposes, and this vegetable produce can be obtained only from India.) The antiquity of this traffic leads us therefore back to a period, when the Aryans had scarcely made any progress in the occupation of India. Many customs and manners which old and modern non-Aryan inhabitants have in common with the ancient nations of Arabia and India must be ascribed as much to the affinity and relationship of those nations as to the consequences of mutual intercourse. Thus the polyandry which prevailed formerly in Arabia, as it still does in Malabar, among the Nairs, was an institution common to the Kushite tribes. The system of caste, is originally not peculiar either to Semitic or to Aryan races. The division of a population according to profession, art and trade, which often coincides with racial differences, is a natural result of social life. These distinctions appear to have assumed in Egypt at first a certain definite form, and to have developed into the system of Caste. Access to caste though was in Egypt not debarred to outsiders, for sons of priests could become warriors, and those of warriors could become priests, &c. It is a fact worthy of notice, that Southern India, where Kushite and Dravidian races preponderate, is also the stronghold of the institution of caste. Even the legal Hindu prescriptions about caste, which is now viewed as a religious regulation, especially through the priestly ascendancy of the Brahmans, are notwithstanding their comparative antiquity, young when compared with Kushite institutions. When the knowledge about Indian science was in Europe still in its infancy, there

was no doubt prevalent a certain mania to connect India and Egypt in a most arbitrary manner; but the reaction against these opinions has also been carried too far, and it is now time to consider quietly the extent of the relations between India, especially Southern India, and Egypt. There exists, no doubt, up to this very day, a singularly striking affinity between the non-Aryan elements of India, whether Kushite or Dravidian on the one, and the old Turanian and Kushite empires on the other part. The eastern nations are conservative in their customs, and ancient fashions may be traced in proportionally new institutions or structures. How can we explain, for instance, the striking resemblance that exists between the famous Pagodas of Tanjore and Madura with the Pyramids of Egypt without considering those connections?

The Egyptians not being, as we have seen before a seafaring nation, employed in their naval expeditions the Phœnicians. That the latter had been previously domiciled on the Persian Gulf was a fact, with which already Herodotos had become acquainted through the archives of Tyre. Strabo mentions, that the islands of Tyros and Arados, the Bahrein Islands of our days, contained temples similar to those of the Phœnicians and that the inhabitants of these islands regarded Tyros, Arados, &c., in Syria, as their colonies. When the Kanaanites were dislodged from the Persian Gulf, a part of them invaded Egypt and the others settled in Syria. This country they found in the possession of Semitic tribes, whom they expelled, but whose language they adopted;[2] this explains why the

(2) The term *Semitic* applying to Hebrew, Arabic and other kindred languages was first used by Johann Gottfried Eichhorn, and has been since adopted generally in this sense. But it can hardly be regarded to be happily chosen, as many Hamitic tribes spoke languages nearly related to those so-called Semitic languages. The question as to the relationship between Hamitic and Semitic languages has to be one day thoroughly investigated.

literary remains of the Phœnicians are written in a dialect so similar to the Hebrew. When Abraham arrived in Palestine, he found the Kanaanites already residing there. The most important and oldest town of the Phœnicians was Sidon, whose commerce was highly developed, when the Hyksos were driven from Egypt. Sidon acknowledged in the Egyptian King its suzerain. It was the policy of the Phœnicians to propitiate the good graces of their mighty neighbours, against whom they were not able to contend; while they assisted them on their part with their fleet. The Phœnicians and the Hebrews met first as enemies, but when both found themselves confronted by a common foe, the Philistines, they made up their differences and became allies for nearly two centuries, the temporary weakness of the Egyptian and Assyrian empires favoring the independence of both. Thus the kings of Tyre became friends of David and Solomon. Hiram's great object was the fortification and embellishment of Tyrus. David bequeathed to his son Solomon the building of the temple, which could not be accomplished without the help of Hiram. Both kings combined besides in joint commercial expeditions to Ophir. The Phœnicians wished to get the commerce of India as much as possible into their own hands. This was the easier to be obtained, as many Phœnician merchants lived in South Arabia and on the Persian Gulf, where the ships containing the valuable Indian merchandize arrived. From South Arabia caravans carried the precious goods across the desert to Syria. Previous to Hiram the Phœnicians of Sidon had only extended their expeditions to Yemen, but this king of Tyros intended to open direct communications with India. He was successful in his undertakings, though his attempts were soon after forsaken. In fact after the reign of Solomon no Ophir voyages were made, as far as we know. The Ophir expedition started generally once in three years. The ships of Tarshish named after the Tarshish in Spain, left

Elath on the Bay of Elath or Ailah; proceeded to Berenike on the Egyptian coast, and thence to Okelis at the mouth of the Arabian Gulf, a voyage which in those times may have lasted about 100 days, as many stoppages would have been rendered necessary for sufficiently providing the fleet with victuals and water. Starting in May the ships arrived in Okelis about the end of July. From this harbour or from Kane on the Erythræan sea, the ships sailed to the mouth of the Indus, or to Barygaza, or to Muziris, or some other southern port. Professor Lassen has identified Ophir, with the country of the Abhīra, which was situated on the coast of Sindh, north of the Rinn. But if Ophir was the same as the district of the Abhīra, how can we explain the long duration of such an expedition "once in three years came the navy of Tarshish, bringing gold and silver, ivory and apes and peacocks?" For surely, if the merchants of the allied kings obtained these articles from Sindh they could even avail themselves of the east monsoon and be back in a much shorter period. The custom in these ancient times differed much from ours. The truth of the saying "Time is money," has been only appreciated within the last decades. Old Homer tells us, that the Phœnicians occasionally stopped a year in one place (Odyss, 15. v. 455, 456). It is well known, that the ancient navigators protracted their journeys, they provided themselves with seed corn which they sowed, and stayed until it was harvested and then sailed away. But in this particular case, the mentioning of gold as an export article "and they came to Ophir, and fetched from thence gold, four hundred and twenty talents and brought it to King Solomon" creates another difficulty. For gold has been always a precious import article to India, though it is found also here and there in India. Even if the Abhīra were the stupid people, they enjoy the reputation of being, as we learn from the Pañcatantram, where they are said to sell the precious moon crystal (candra-kanta) for three cowries; surely their neigh-

bours, the Hindus, who have a thorough appreciation of the value of gold, would not have let it pass so easily into the possession of strangers. It is therefore probable that the Phœnicians *got the gold elsewhere, very likely from Malacca*, the golden Chersonesus, and that these voyages were called after Ophir, the first place in India where they landed. That the Phœnicians came to Southern India is certain; the peacocks which are mentioned to have been brought from India are called in the Bible Tukkiyim, a plural form of Tukki, *in which word scholars have long ago recognized the Tamil* "togei," as can be seen in old Hebrew dictionaries, especially in that of Gesenius.[3] By degrees the Phœnicians lost their supremacy on the sea, and they disappear from the field of action and with them also perished for a while the great maritime knowledge they had obtained.

When the Persian empire arises in history, commerce no longer flourishes as before. The Persians were no traders, they preferred military fortifications to commercial pursuits. Fancying it possible to be attacked from the seaside, they, obstructed the bed of the Euphrates and Tigris throwing at certain distances embankments across the river, to prevent its being used for navigation purposes. These abortive measures induced the Chaldæan merchants who lived near the Pasitigris to emigrate to the opposite Arabian shore, to Gerrha from whence they continued their commerce with India. Against this country Darius Hystaspes undertook an expedition. It was this which brought on the exploits of Skylax of Karyanda, who in 509 starting from Peukelaotis sailed down the Indus and reached in 3 months the mouth of the Red Sea. Skylax induced the Indian nations who lived along the rivers to acknowledge the Persian supremacy, and in the Persian

(3) Compare with *tukki* the common Telugu word "toka" tail, used also for the tail of the peacock.

inscriptions the Gandhāra and Sindhu occur as tributaries to the Persian empire. They are even mentioned in the army of Xerxes, and Greek and Hindu met perhaps in that Grecian war for the first time.

The earliest accounts of India among Greek writers we owe to Herodotos; but, though he, and afterwards Ktesias, were tolerably well acquainted with eastern countries, the Greek nations, as such, did not become initiated into Indian knowledge until the expeditions of the great Alexander. It is doubtful, whether, the genius of the Macedonian king shone brighter on a battle field or in the administration of his vast empire. The interest he took in science, literature and arts; the ability he displayed in the foundation of towns; the sagacity he evinced in his behaviour towards his newly acquired subjects; all these are objects of praise and admiration. It was he who removed the mean barriers placed by the Achæmenides in the grand old river; it was he, who intended Babylon, which had, in former times, been a great emporium of the Indian trade from the East and from the South, to become the commercial metropolis and the residence of his realm. His untimely death proved fatal to the execution of his vast designs. His successor in Asia, Seleukos Nikanor, abandoned Alexander's projects respecting Babylon, and built a new capital, which he named Seleukeia. In the course of time, Seleukos ceded the most eastern part of his empire to Candragupta, and a friendly intercourse ensued between the Seleukides and the Indian kings. Megasthenes, the ambassador of Seleukos at the court of Candragupta wrote at the beginning of the third century his work on India, but only fragments have reached us, otherwise it would have proved a most valuable contribution to our knowledge of India. The same fate shared the writings of Onesikritos, who, a companion of Alexander the Great, had been his envoy to the Indian Gymnosphistes.

The friendship which exfisted between the Greek and Indian dynasties was renewed in 216, when Antiochos the Great and Saubhagasena revived these amicable relations. But independently of the Seleukidian power, Grecian influence was growing, for Diodotos, Satrap of Bactria, declared himself in 250 B.C. independent, and established the Greco-Bactrian kingdom, which in the time of Demetrios (205) comprised even the country beyond the Jhelum. His successor, Eukratides, struck coins with Greek and Indian inscriptions, and though the western provinces of the Greco-Bactrian kingdom became soon afterwards a prey to Parthian conquests, it increased in the East, up to the Jumna and embraced even Gujarat. But it did not last long. Its influence survived, by introducing Greek thought and Greek civilization, to which the Hindus through the temporary preponderance of Buddhistic doctrines proved themselves rather susceptible. The nicknames Yavanamuṇḍa and Kambojamuṇḍa, baldheaded Greek and baldheaded Kamboja are explained from the fact that those nations patronised Buddhism and that Buddhist mendicants had their crowns shaven.

Since the days of Alexander the Great and the decay of their political independence, the Greeks turned cosmopolitans. They spread everywhere, carrying with them their high culture, and becoming the pioneers of refinement. Even in the far East, they founded colonies as the Greek name of some places proves. Iambulos crossed the Indian Archipelago and Greek merchants resorted even to China. The works of Strabo, of Plinius, the Periplus Maris Erythraei, the writings of Dionysios Periegetes, Ptolemy, Arrianos and others—amply testify to the great activity displayed by the Greeks in their travels and in their commercial pursuits. In latter times Alexandria in Egypt, became the great centre where Western and Eastern nations flocked together, but it was not until Egypt had become a province of Rome that the

foresight of Alexander, in choosing this spot for an emporium was duly appreciated.

The powerful empire of the Parthians was inimical to the Romans, the transmission of Chinese and Indian goods across Mesopotamia was inhibited, and though the way along the Oxus and by the Caspian sea was still open, the direct sea trade offered now greater advantages. Under those circumstances, a bright future dawned on Alexandria, especially since a steersman, named Hippalos, re-discovered the existence of the south-west monsoon, the knowledge of which had fallen into oblivion since the times of the Phœnicians, and the grateful sailors called henceforth this south-west monsoon Hippalos.

The voyage to India was generally undertaken from Kane, the modern Hadramaut, or perhaps from a harbour nearer to Cape Gardafui. The more the commerce increased between India and the Roman Empire, the greater progress was also made in the art of navigation. The Western trade was viewed in India with favorable eyes, and the occasional embassies which were sent from India to Roman Emperors show this fact plainly. Thus we hear of Indian envoys with precious presents being sent to Augustus, Claudius, Antoninus Pius and Julianus.

With respect to the knowledge concerning India, it is certain, that the author of the Periplus did not double Cape Komorin, but Plinius was acquainted with the Koromandel Coast and Ptolemy's knowledge embraced Burmah and even China. This country was visited by a Greek merchant Alexandros, who stopped at Kanton, Markianos of Heraklea and Ammianus Marcellinus provide on these points still more accurate accounts. We may perhaps be allowed to call Naustathmos (Karaci), Theophila (Suradara) in Gujarat, Byzantium on the Malabar Coast and other places Grecian colonies.

As long as Rome was the sole capital of the Empire, Indian goods went from Alexandria mainly to Rome, but when the Empire became divided, Byzantium, or as it was now called Constantinopolis, participated in the receipt of the eastern articles. Among the merchants who met in Alexandria, many Hindus were to be found; though the statue of the river god Indus, in that town, was probably the gift of a Greek and not of a Hindu. The presence of Brahmans is even reported from Constantinople. But the Byzantine Emperors had to encounter the opposition of the new Persian dynasty, which wanted to monopolize the Indian trade. This happened also in Yemen, whence Justinianus tried to get Chinese silk through an alliance with the Homerites, until at last in 536 some monks succeeded in bringing silkworms to Europe.

The Persian seaports, Teredon and Charax, whose position near the mouth of the Tigris was not far distant from Ktesiphon and Dastagard, the residence towns of the Sassanides received directly the merchandize of India. This trade was very lively, and being lucrative, the Persian kings did not brook any rivalry. From the description of the spoil found by the Emperor Heraklios in the palace of King Khosru Perviz, we gather, that a great many Indian articles were consumed in Persia. The relations between these two countries were friendly. Bahram Gor of Persia visited the King of Kanyakubja, and married one of his daughters. He became, it is said, so fond of Indian music that as his country did not possess any accomplished musicians, he sent for 12,000 Indian musicians. One of his successors, Khosru Anushirvan, the Conqueror of Beluchistan despatched his learned physician Barzuyeh to India, to obtain a plant which could restore to life again murdered persons, and which was reported to grow in that country. His search was, as can well be guessed, in vain. At last he was informed that that plant was meant to denote the science contained in a book

deposited in the Royal Treasury. • Barzuyeh demanded and received a copy of the precious work which he brought home and translated into the Huzvaresh language. The book in question was the Pañcatantram.

The commerce of the Greeks of the Byzantine empire sustained a severe blow from the Arabs, to whose conquests the Sassanides had succumbed still earlier. The sea road, viâ Alexandria, was now blocked to the Greek merchants, who received Indian goods mostly by the way along the Oxus and through the Caucasus. Trapezunt profited by this dislocation of the trade.

Soon after Mahomet's death and four years previous to the destruction of the Persian Empire, Khalif Omar with an eye on the Indian sea trade, founded the harbour of Bassora, but his expeditions from the coast of Oman to Thana, near Bombay, and to the mouth of the Indus, were undertaken rather more from political than from commerical reasons. The intercourse between both nations remained then suspended for some time, the wars in the West and internal dissensions preventing the Arabs from devoting themselves much to the peaceful pursuits of commerce, but the subjects of the Khalif still continued their traffic with the Ceylonese. The island of Ceylon was, as is well known, regarded by the Mussulmans to have been the Garden of Eden, the earthly paradise, in which Adam had resided, Muhammedan pilgrims migrated every year to the mountain called Adam's Peak, in order to worship the steps seen on the rock and ascribed to the father of mankind. In fact the bad treatment which an Arab ship, returning from Ceylon, experienced at the western mouth of the Indus by the marauding inhabitants of Dipal, induced Khalif Valid to despatch an army against the king of Sindh, and in 712 this kingdom was conquered by the Arabs. From that time the Indo-Arabian trade steadily increased; and as we are well informed by contemporaneous

Arabian travellers, whose valuable descriptions have come down to us, we are enabled to form a pretty correct idea of the commercial relations between both nations.

The Arabs were next, to the conquest of Sindh, indebted to a lucky incident for a favorable turn in their connection with India. It was at the commencement of the ninth century that an Arabian ship, full of pilgrims on their way to Ceylon, was driven to the Malabar Coast. The then reigning Zamorin of Kalikut, Ceruman Perumal, received them kindly, and becoming acquainted through intercourse with the ship-wrecked people with the tenets of Islam, turned Mahomedan himself and went on a pilgrimage to Mekka. There he died. But before his death, he enjoined his successor to treat with hospitality the Arabian merchants, to allow them to erect mosques and to be under the jurisdiction of their own judges. This request was granted, and a regular intercourse and commerce between both parties ensued. The Mussulmans who settled in the domains of Ceruman Perumal, were called Mapilla or Moplai by the Hindu inhabitants, and many of these immigrants, and their descendants, became in after times industrious husbandmen.

The extent of the Arabian trade is best illustrated, by their geographical system, and as our attention is now directed, to the sea trade, a few remarks respecting the former will be appropriate. The Arabs divided the Eastern Ocean into seven seas, the first was called the Bahr Faris (Persian sea), our Persian Gulf. On its coast lay the harbour Siraf, which was visited by Chinese vessels. These Chinamen were much stronger built than the ships of the Arabs. The latter were built with the planks of cocoapalms which were fastened together by wooden nails, as iron nails were considered to be unsuitable for the Indian Ocean. For in the Middle Ages it was generally believed that at the bottom of that sea a large magnet attracted the iron floating on it, and that as soon as

ships with iron nails came near that magnet, the iron nails would be drawn from the ship's planks and the vessel with its unfortunate crew sink to the bottom. From Siraf the ship sailed first to Maskat in Oman at the southern end of the Persian Gulf and reached then the second sea Larevi which represents the northern part of the Indian Ocean. Kulam Mali (Quilon) was the next harbour to be visited; from there a month's journey took them to the Nicobar Islands. The sea between Ceylon and the Nicobars and Andamans was called Harkand. The Andamans were not omitted in their voyage and from there they steered to Kalah (Kalahbar) then the great emporium of Malacca, which the Arabian traveller, the famous prince Abulfeda (1331) mentions as the most important trading place between Arabia and China, and where many foreigners, as Mahomedans, Persians, Hindus and Chinese flocked together. Malacca itself was then dependent on the king of Java, whose riches and splendour are described in the most glowing terms. Java, or Zabej as it was then called, is said to have been so densely inhabited, that when a cock began to crow in one village, the cry was taken up by the cocks in the next, and was soon heard all along the Island. The fourth and fifth seas, named Shalahat and Kidrang are the next, but their position is difficult to fix, as the reports are so confused. The sixth sea Senef comprehending the Gulf of Tonquin and a part of of the Sunda sea lay on the east of Kochin-China and was separated from the seventh sea Sanji, by the Straits of Hainan, which were regarded to be the gate of China. The last named sea washed the East coast of China and there was situated that famous Arabo-Chinese harbour, Gampu. We see, therefore, that however limited was the knowledge of the Arabs of the real nature and position of the lands and seas they visited, their participation in the Eastern, and especially in the Indian trade was very considerable.

This is also the place to mention that, besides the Arabs, Jews, Nestorians, and in later times Parsis settled in India. From a commercial point of view the last deserve attention as some of them became most prosperous merchants.

While the Arabs extended thus their commerce, of which India was the centre, as far as Gampu in China, the Italian cities Venice and Genoa, also got a fair share of the Indian traffic. Many citizens of those famous towns travelled far in the East and entered into commercial transactions with oriental princes and nations. The crusades though originally undertaken for religious purposes and unsuccessful in the attainment of their principal object, proved of the greatest importance in removing many prejudices which existed between Occident and Orient, and in causing friendly relations to arise out of deadly religious strife. The Venetians possessed a factory in Alexandria, still the centre of the commerce between Europe and Asia. The Genoese founded Kaffa in the Crimea and Tana, being favoured by the Palaeologian Emperors. Augsburg in Germany lay on the highroad, which having crossed the snowy Alps, formed the passage for the Eastern and Indian products to the centre of Europe. The Hanseates participated in the Levant trade, and Bruges, in Flanders, became opulent by its factories, which manufactured the raw materials of the East. Spain, France and the British Islands had their fair portion in the Indian commerce, though the real traffic in those days was more in the hands of Italian and German towns or confederacies.

This state of things lasted, until the Portuguese, roused by the reports of the existence of that mighty but mysterious potentate the Prester John of India, whom I have identified as the powerful Emperor of Central-Asia, the Korkhan of Karakhitai, despatched Bartholomeo Diaz and later Vasco da Gama in search of him. The latter did not find the renowned priestly king but instead the seaway to India. The landing

of Vasco da Gama at Kalikut, together with the discovery of America, a few years earlier, altered the whole direction of commerce, until by the reinstitution of the Overland mail, and more so still by the successful termination of the Suez canal, the old time-honoured road to India and China *viâ* the Mediterranean and Red Sea has been again revived.

Modern inventions have done much to lessen the distance between the East and the West, but apart from this, the nature of the trade is not materially changed. Though it is now a matter of no difficulty to perform the sea-voyage from any part of the world to India, the Central Asian caravan trade which beginning in China, passed to India, and went to Babylon, to Egypt and so forth, is, owing to the depredations and wars of the barbarous hordes, and the existence of half barbarous states in regions which were formerly the sites of flourishing realms, no more of the importance it once enjoyed, even in the remotest times.

Having in the above commented on the commerce of the Hindus with foreign nations up to the appearance of the Portuguese in this country, we must now turn our attention to the integrant part of commerce, to the merchandise itself.

With respect to the inland trade of India our information is again very scarce. Indian sources supply only scanty reports. The second book of the Mahābhārata contains in the description of the Rājasūya sacrifice a list of the presents received by king Yudhishṭhira; other accounts can be derived from some Buddhistic Sūtras. Thus we read in the former, that the king of Kamboja brought horses, for which that country was very famous, female camels, woollen cloaks embroidered with gold, and skins of Kabul cats and antelopes. The Paradas, who inhabited Gedrosia (Beluchistan) and the Abhīra of Ophir fame presented cows, goats, sheep, donkeys and camels, woollen coverings, and an intoxicating beverage

made of fruit. The Śūdra, a border people near the desert of Sindh, showed their submission by coming to Yudhishṭhira with skins of goat and Ruru stags and with Kabul horses. The eastern kings brought precious seats, beds and armour adorned with jewels, gold and ivory, as well as variegated elephant covers, tiger and elephant skins, iron arrows and excellent arms. The nations living near the Brahmaputra and the mouth of the Ganges arrived with gold, perfumes, with precious woods, with rare birds, animals, and skins. The Cola and Pāṇḍya carried fragrants, sandal-oil in golden tankards, sandalwood, gold, jewels, and fine textures. From Ceylon came precious pearls, and dyed cloths. This extract yields only scanty information, the products of large countries are omitted, yet we are able to ascertain those of a few.

In enumerating the different articles of trade, the Indian export articles will be given first, and followed by the foreign import articles. The principal sources of information respecting the ancient export trade are the account written by an Alexandrian merchant and perused by Plinius the Elder and the Digesta or orders issued between the years of 176 and 180 by the Roman Emperors for the purpose of fixing the duties, which were to be levied from those articles.

Though elephants, tigers, leopards, panthers and other large beasts were occasionally exported from India, one can hardly include them in the list of merchandise. Rome especially was the place where they found a good market, as they were wanted in the amphitheatres for the Circensian plays. King Solomon received from India apes and peacocks, as we have seen before; the Dravidian name of the peacock in the Bible intimating the presence of Dravidian traders. Herodotos praises the good qualities of Indian dogs, which were highly esteemed by King Darius, and which most probably would not claim any relationship with the ill

used Pariah dogs of our days. Indian tortoises also found a good market. But not only living animals, valuable skins and horns also were exported.

Pearls were another article, highly prized alike by ancient as by modern nations. One of the most renowned pearl-fisheries was on the coast of Ceylon, especially at Perimula (Perimuḍa) on the island of Manaar. We know that the Medes, Persians and other eastern people paid immense sums for pearls, and Plinius tells us, that the Romans, especially the Roman ladies, were very fond of them. The Roman ladies adorned nearly every part of their body with pearls, even down to the straps of their sandals, making their presence known by the clinking of pearl-strings as do to this day the Indian dancing girls. The sumptuousness displayed in those times exceeded all bounds, thus we read, that Lolla, the wife of the Emperor Caius Claudius, appeared often publicly covered with smaragds and pearls, worth 40,000,000 sesterces or £300,000 sterling. The story about the wager between Queen Cleopatra of Egypt and the Triumvir Antonius is well known. She possessed two large pearls, used as pendents of the ear, which had been previously the property of other eastern monarchs and were valued very highly. She dissolved one in strong vinegar, drank it, and was only prevented by an attendant of Antonius from dissolving the other pearl. The draught thus swallowed was esteemed to be worth 10,000,000 sesterces, or a little more than £80,000 sterling.

Though *Silk* is indigenous in China, and Kattigara (the modern Kanton) was in ancient days the great silk market, silk may be mentioned here, as the western nations received it *viâ* India, and it is mentioned as Sericum Indicum in the Roman Digesta. Moreover there exist also in this country 12 species of silk spinning worms. Indian-made silk articles were bought by Greek and Roman merchants. In the latter times of the Roman Empire silk dresses became more

fashionable and many were the strictures in which some sober writers indulged, when complaining about the luxury and wantonness of the Roman ladies, in dressing themselves in precious and thin silks. It is remarkable, that the real origin of silk remained a long time unknown. Pausanias who wrote his archaeological work on Hellas is the first classical author whose ideas about silk and silkworms are pretty correct, for the general notion was, that the silk was combed from the leaves of trees. If we enumerate now the Indian export articles derived from the vegetable kingdom, we shall soon observe, that both in number and in value they are superior to those belonging to the animal world.

Of grains *Rice* formed an important commodity. The cultivation of rice extended in ancient times only so far West as to Bactria, Susiana, and the Euphrates valley. The Greeks most likely obtained their rice from India, as this country alone produced it in sufficient quantity to be able to export it. Moreover the Grecian name for rice *Oryza*, for which, there exists no Aryan or Sanskrit root, has been previously identified by scholars with the Tamil word *arisi*, which denotes rice deprived of the husk. This was exactly the state in which rice was exported. The Greeks besides connected rice generally with India. Athenaeos quotes *Oryza hephthe*, cooked rice, as the food of the Indians, and Aelianus mentions a wine made of rice as an Indian beverage. If now the Greek received their rice from India, and the name they called this grain by is a Dravidian word, we obtain an additional proof of the Non-Aryan element represented in the Indian trade.

The *Cotton cloths* (*sindones* of Herodotos) show by their name their Indian origin. It occurs also afterwards in the Periplus where a distinction is made in the cotton goods according to quality, and cotton thread is mentioned as a separate article. The Roman Digesta call the cotton thread *carpasium*, and the cotton cloth *carbasia*, which name for the latter is also used by the Alexandrian merchant, the Sanskrit name being

Kārpāsa. Up to the first century after Christ the cotton tree was, except in India, only cultivated in the small islands of Tyros and Arados in the Persian Gulf.

Ebony and *teakwood, sugar-cane* and *bamboo-cane* were in great demand, the medicine Tabashir was derived from the latter. *Asafoetida* in Sanskṛit *Bhūtāri*, the enemy of evil spirits, was a well known physic to the Alexandrian merchant and to Hippokrates under the name of Butyros. This was afterwards erroneously taken for Butyron, butter. Pliny (XII, 16 and XXIV, 77) mentions that the best *Lycium*, a medicine prepared from a certain boxtree (Pyxacanthon), and the reddish bark of the root of the *Macir* tree, which was considered as a specific for dysentery, came from India.

India is rich in vegetable dyes, but its most famous is, no doubt, *Indigo*, the Indikon of the Greek. Already Vitruvius mentions the Indicus color, and Plinius distinguishes between two different sorts of Indicum. The frequent attempts made to adulterate it, show how highly it was appreciated. At Selinos in Sicily surrogates of this description were manufactured. One pound of good Indigo fetched about 10 dinars or 3 rupees. Among the Indian spices *Pepper*, pippali in Sanskrit, was much in demand. It grows wild in Malabar, Muziris and Nelkylda were the most frequented pepper markets. Old Pliny could not understand why people should take so great a fancy to such a hot article. A pound of white pepper was sold at 7 dinars or 2 rupees, and a pound of black pepper for a little more than 1 rupee. The collection of pepper was associated in the medieval legends with wholesale burning of venomous snakes, which infested the pepper plantations.

Another spice of great value and request was the *Cassia*. The Laurus Cassia grows in Malabar and Canara, on the Himalaya, in Bhutan and Nepal. The tree attains a height of 60 feet, has white flowers, and its inner bark produces a

spice, which though in flavour and taste similar to, is coarser than cinnamon. The real *cinnamon* is indigenous to the country of Somali on the eastern coast of Africa, and was afterwards introduced to Ceylon, whence the Arab traveller Ibn Batuta reports on it. It grows about 30 feet, has likewise a white flower and a small berry, which yields a useful oil. Its inner bark produces the famous cinnamon, the bark contains the precious cinnamon oil, its leaves furnish the *mace oil, and its roots camphor.* The Bible (Exod. xxx. 23-24) knows both Cassia and Cinnamon, so does also Herodotos and Theophrastos. The real cinnamon came originally from Ethiopia, and cassia from Malabar. The Roman Digesta distinguished between Cinnamomum, Xylocinnamomum, Cassia tantum and Xylocassium. The price of cinnamon fluctuated much between 25 and 300 dinars or between 7½ and 90 rupees the pound; and of cassia between 5 and 50 dinars or 1½ to 15 rupees. Cinnamon and cassia were also esteemed physics. The leaves of the cassia and other laurel trees yielded the highly esteemed *Malabathron*, the Tamalapatra of the Indians. The Alexandrian merchant tells us a peculiar story how this precious spice was obtained. There exists, he says, a barbarous race of men with short figures, broad faces and flat noses, who are called Sesatai (Besadai). Every year they come, together with their wives and children, to the frontiers of the Thinae. There they encamp, resting on mats made of rushes, tendrils and leaves, which they carried from their home with them. As soon as they are gone away people, who have watched them, gather the mats, which these Besadai had left behind, extract the fibres from the reeds, and collect the leaves. Out of these they gain the Malabathron, of which exist three varieties, and bring it to the harbour Gange on the mouth of the river of that name. It came also from Further-India and was as highly valued as cinnamon.

Cardamum and *Clove*, indigenous in the Philippines, came *viâ* India and were regarded as Indian articles. *Ginger* was imported as well from India as from Ethiopia.

Among perfumes and scents *Aloe* was very highly esteemed in ancient times. Aloe is the wood of the Aghil tree, which is turned in consequence of a disease into a dark brownish, veined resin. If it is heated it spreads a very agreeable smell. The best sort is called Ghark, and sinks when placed in water; the next best, Nimghark, is still lighter and nearly floats; the third least valuable, Semeleh, is the lightest. It is indigenous in Kochin-China, Kambojah, Siam, and also in Assam. Its name is generally Aguru (Agaru) in Sanskṛit, which word denotes in this language *not heavy*, but as the best species is really the heaviest, it seems clear, that the name was not originally Sanskṛit. In the Bible it is mentioned as Ahālīm, which resembles more the word aghil, in Tamil, and which being identical with the Sanskṛit word suggests that the latter was derived from the former, while the Tamil word itself is probably derived from the name by which Aloe was called in its native country. The Burmese name for Aloe is *Akyan*, it resembles *Aghil* and *Ahālīm* and seems to contain the original root of the word. In the Mahābhārata Bhīma receives presents of aloe. The word *Aghila* was through ignorance turned into *Aquila* by the Portuguese, and thence comes the erroneous name Aquilaria or Eagle-wood. It is still very dear, in Kochin-China the pound sells between 18 and 55 rupees, and in Japan even at 650 rupees.

The fragrant *sandal wood* grows in Malabar and in Mysore, in the zone above the teaktrees, it is also found in the Sunda Islands, but the most precious sandal wood comes from the first country. The middle of the trunk contains the odoriferous innerwood, and the darker its colour the more sweet-scented it is. Three kinds, red, yellow and white, are distinguished. Its use and qualities are well known, as

incense it is burnt in temples and private houses; as a powder it produces a refreshing effect and becomes also a cooling salve, its oil is used as a cooling remedy. Its beneficent qualities are praised by Indian poets; in the Bible it is repeatedly mentioned, but it was not much patronized by the Greeks and Romans, who applied it more as a purging medicine.

The *costus* of the ancients is the Sanskrit "kushṭha," one species came from the neighbourhood of Multan, another from Kabul and Kashmir. The Romans had a great predilection for this root, they used it at sacrifices, its oil was turned into a salve, and they mixed their wines with costus and availed themselves of it as a medicine. One pound sold at 6 dinars or $1\frac{1}{5}$ rupees. The *nard*, in Sanskrit Nalada, grows on the banks of the Upper Indus, in Nepal, and along the Ganges. The reputation of this Valeriana had already spread in early times, the singer of the song of Solomon praises its fragrance. The spikenard possessed at one and the same time leaves and ears, the sweetness of its flavour and its fine red colour were equally esteemed. Its value depended on the size of the leaves and a pound of the best leaves was worth 100 dinars or 30 rupees, the smallest leaves fetching the highest price.

Bdellium is the gum of a tree, ascribed to Arabia, Media, Bactria and India. The tree from which this resin flows, grows still in Eastern Bengal and in Assam. Most probably it was exported from India, the Bible mentions it in different places. Like costus it was also used to temper wine, though its medicinal application prevailed.

Having thus far mentioned the most important plants which the ancients received through their trade with India, we have now to turn our attention to the minerals.

The first and most important mineral which is said to have been exported from India, is *gold*. That there were goldmines

in India is a fact beyond doubt, and some rivers contain gold dust. Even the second chapter of Genesis according to the generally accepted explanation attributes gold to India. Gold was found in the Himālaya in the north and in the Western Ghat in the south; and in the rivers, which spring from the Himālaya, especially in Ladakh and Iskardo. Herodotos relates (III. 102) the story, that in the country of Daradas, ants smaller than dogs but larger than foxes collect gold in their dens, that the inhabitants of these regions take the gold out from the holes and bring it to Darius, the king of Persia. The old Hindus were acquainted with this story, called the gold collected thus *pipīlika*, from *pipīla* a black ant, Megasthenes and Nearchos saw the skins of these ants, and the former describes them as equal in size to those of foxes and in outward appearance similar to those of panthers. Later investigations have shown that those black ants are marmots which live in Tibet, and whose annularly marked skins are a great export article to India and China. These marmots heap up the shining gold dust in their dens, and their mode of life resembles that of ants. This is the reason why they were called ants. Alexander von Humboldt observed that the ants in northern Mexico carried to their ant-hills a certain shining substance which sparkled like Hyalith. It may be, that the Daradas remarked a similar habit among the ants. However that may be, and though gold is found evidently in India, it is extremely unlikely that gold was ever in any considerable quantity exported from India. We had an opportunity of speaking about this subject when discussing Solomon's exp[illegible]ions to Ophir. India has long been regarded as the [illegible] country in the world, and though this is far from [illegible], the greater the ignorance, the greater was als[illegible]ration. The geographical ideas of the extent [illegible]ry indefinite, and the uncertainty attaching [illegible] India in the Ancient and the Middle A[illegible]t difficulty in

explaining old writings. At times the whole south-eastern part of Asia is called India, and it comprises often Ethiopia in Africa. There is no reason then, why Further-India, especially the Chersonesus Aurea, Malacca, should not be included in the India of the Ancients, and if so, there is no difficulty in ascribing the gold of Ophir to have been found in Malacca. From the nature of the Indian commerce, gold was essentially an import article to India, as it is also now.

Iron was found in India, and the old Hindus knew the secret of making good steel, the sword-blades of Gujarat especially enjoying a great reputation.

Though the *tin trade* goes back to far remote times, India itself is not rich in this metal. It is more abundant in Tenasserim, Malacca and the island of Banca. The Phœnicians were the earliest tin merchants, in fact, it is owing to this metal that their commerce became so extended. Neither Egypt nor Babylonia possessed tin mines, the nearest countries to these which possessed tin were Caucasia, India and Spain. If we now find bronze implements in Egyptian tombs, whose age goes back as far as 4000 before Christ, surely one is bound to admit that a widely expended commercial intercourse existed already in very distant days. Whether the Greek word for tin *kassiteros* is derived from the Sanskṛit *Kastīra*, or whether the Hindus got it from the Greeks, is still doubtful. That it was originally not much found in India but in Further-India is immaterial, as it was early known in India, and the fact of the word *Kastīra*, occurring in Pāṇini's Sūtras is important.

Perhaps hardly any country can equal India and Ceylon in the possession of precious stones. Parts of India, foremost Golkonda, have always been considered as mines of gems. From India the ancients received the famous *Diamond*. Between the 14th and 25th degrees of northern latitude, mostly on the eastern side of the Dekkan and the Amarakaṇṭaka

plateau, near Kaḍapa, Nandyāla, Rāvalkonda, Ellora, Śambhalpur and Panne lie rich diamond fields. The best diamonds were retained for the adornment of Idols and Kings, others were hoarded up in royal treasuries. Their number can hardly be guessed, if we consider only the enormous quantities of diamonds taken by foreign conquerors out of this country. Plinius contains a great deal of information about the diamond, whose pounding, by which they were reduced to atomic dust, he declares to be one of the grandest discoveries ever made by the human mind. That to the diamond thus pounded were ascribed some absurd powers, we were lately again reminded of in an important State trial. According to Plinius diamonds could not be pounded unless in the fresh and still warm blood of a buck.

Crystals too were exported from India, for the Indian crystal was highly esteemed. The Rājapippali mountain range between the lower Narmada and Tapty yielded *Onyx* and *Sardonyx* stones in large quantities, hence Ptolemy called it the Sardonyx-mountain, Indian *Hyacinths*, *Amethysts*, *Smaragds*, *Carbuncles*, *Beryls*, *Sapphires*, *Chrysolites* and *Opals* were sent in large quantities, to the great western empire, and this export trade in gems must have been very considerable. How highly precious stones were valued at Rome, one example out of many will clearly show. The Roman Senator L. Nonius, the son of Struma Nonius, and the brother-in-law of P. Quinctilius Varus was proscribed by the Triumvir Antonius, for the sake of an Opal, the former possessed. Nonius escaped leaving all his treasures behind, but took away with him his opal ring, which was valued at 200,000 sesterces or about £8,000 sterling.

We must not forget the famous *Murrhinian vases*, which though really not of Indian origin, were exported from Barygaza together with onyxes. They were manufactured of a mineral Murrha, composed of felspar, fluorspar and calcareous spar, which was found in the mountains on the Caspian

sea, in Armenia and Persia, and were remarkable for their hardness and beauty. Drinking and eating vessels were generally made out of them. Pompeius Magnus brought in 63 B.C. the first murrhinian drinking vessels to Rome, this happened at his third triumph against Mithridates. A small piece of murrhinum just enough for a small goglet, containing the 48th part of an amphora, was sold at 70 talents. The Consul Petronius possessed a large number of such vessels, the Emperor Nero coveted them and took them from the children of Petronius. Nero was able to furnish a whole theatre with them. Among these pieces of *vertu* was a magnificent scoop, for which Petronius had paid 300 talents; suspecting the designs of Nero, he broke it to pieces, before he died.

We mentioned above that Indian articles were in request among other nations, but that these could not supply in return anything which met with an equal demand from the Hindus, as their wants were moderate, and easily satisfied. In a country where the three necessaries of life food, drink and clothing (Annapānavastrāṇi) amount to so little, where a few grains of rice, some draughts of water and a few yards of cotton suffice for existence, this could not be otherwise. Thus foreigners were obliged to pay in coin for the goods they bought and as precious metals are the universally acknowledged means of interchange, gold and silver coins were imported in great quantities into India. In fact the annual drain of these metals from Europe to India was an object of great anxiety in ancient times. Pliny complains most bitterly about this state of affairs, and is highly indignant that 50 millions of sesterces or two millions sterling were year after year swallowed by India, to pay for Eastern goods, by the selling of which the Western merchants gained at least 100 per cent. Besides gold and silver, copper, lead, and tin also were imported to India.

The old Hindus were very fond of *corals*, and attached to them a similar value as foreigners to pearls; in consequence many corals were imported to India, as were also some varieties of *Sards* and *Sardonyxes*. *Glassware* found a good market in India. The Hindus have never up to this very day made much progress in the manufacture of an article, whose invention was known in the dawn of historical days to the ancient Egyptians.

Frankincense and *meliloton*, perhaps an Egyptian kind of lotus, whose stalks have a sweet taste and were a favorite dish in Egypt, were brought to India. From the frankincense a valuable oil and salve were prepared. The importation of wine mostly from Laodikea in Syria and from Italy is an undoubted fact. The Alexandrian merchant mentions specially the presents of wine, he made to an Indian prince. As in those times comparatively few Europeans lived in India, the wine must have been drunk nearly exclusively by natives, and considering the variety of race, and of caste, there is no reason to wonder. Even now-a-days more wines and spirits than the combined thirst of the European community can digest, land in India, and what is more, are consumed in this country. On the other hand, the stories of inebriety among Hindus which Greek writers, as Chares of Mytilene, record, are to say the least exaggerated.

If we add to this list of import articles *linen cloth*, we have mentioned the most common and valuable ones.

Comparing the two lists of import and export goods with each other, we see that, while the latter is very considerable in number and differing in variety, the former contains only a few articles. The reason of this striking difference has been already explained. The nature of the Indian trade is even now not materially altered. We meet, with a few exceptions, the same goods in ancient times as in our days. After all, men and countries do not change much, and the nature of

both remains the same. The greater number of European inhabitants in this country has produced a large influx of European merchandise, which originally intended for the use of Europeans has found its way also into the household of natives. As one of the most valuable new import articles we may mention stationery, while the list of the export articles is not materially altered, after including in it cotton, coffee, tea and tobacco.

That the most numerous and useful articles of Indian products belong to the vegetable kingdom is, from what has been mentioned before pretty clear, and this fact at once assigns to India its proper position, *i.e.*, India is essentially an *agricultural country*.

The great European discoveries in science have also affected Indian commerce, but here it is not our intention to discourse on this topic.

The exchange of material goods, though being the obvious object of commerce, cannot take place without causing a material change in the habits and ideas of those who come thus in contact with each other. Paltry prejudices are abandoned, the human mind expands in toleration, as it does in knowledge. The great historian of ancient Greece ascribes the civilization of Greece and the rapid growth of Greek literature to the free trade which existed between Egypt and Greece since the days of the Saidic dynasty.

If we apply these observations to India, we shall find that though the Hindus supplied to other nations the most precious products of their native country, they received back not only their money's worth in gold and silver, but also, and what is more valuable, a knowledge of the great scientific researches, made by their more advanced neighbours.

When the Aryans began to stir in their old home near the Hindu-Kush, about 2,500 years before Christ, Turanian,

Cushite and Semitic empires had already a long history behind them.

To Egypt and to Babylonia the Aryan Hindus owe a great debt of gratitude. How far they were influenced by the Cushites and Dravidians of India it will be difficult to determine. To the former they owe directly or indirectly their astronomical or rather astrological science, the philosophical systems on cosmogeny and atomism, the art of writing, at first so detested by the Brahmans, who feared to lose their ascendancy, if the knowledge of writing became general; as in after years the invention of printing was opposed by the Obscurantes in Europe.

To the intercourse with the Greeks they are indebted among other things most probably to the drama, to the art of minting coins, and to an increased knowledge of astronomy. The Hindus had a high appreciation of Grecian science in general, and they acknowledge specially the Yavanas as their masters in astronomy. Many astronomical terms in Sanskrit are derived from the Greek. We observed before, that the Greeks were favourable to Buddhism, which owed its success in India most likely to the support of the non-Aryan population. To what an extent at a later period the cultus of Krishṇa was modified by Christian legends, which found their way to India, is beyond our power to say.

On the other hand, the Hindus contributed, when their turn came, much to the advancement of science, whose depositors they had become. Whether it is owing to the enervating heat or to some other climatic reason, the Hindu though gifted with a sharp, discerning intellect, is on the whole not gifted with the genius of originality. Very few inventions or discoveries have been made by Hindus. The study of astronomical and mathematical science was prosecuted with great zeal and success in India, but the first influence of the Hindus on the West was through the medium

of philosophy. Buddhism and other philosophical or religious systems, originated in India, biassed to a great extent the doctrines of early Christianity. This we perceive in the doctrines of Emanation, in that of the Migration of the soul and others. The gnostic Bardesanes of Edessa, a friend of the Indian Ambassadors at the court of Antoninus Pius (138-161) was well acquainted with Indian philosophy. The same can be said of Clemens of Alexandria and Origines. The heretic Mani was a great admirer of Buddhism which proselytizing religion was centuries ago already known to the Greeks.

The Mahomedan invasion was the means of introducing the sparks of Indian wisdom to the West, which began just then to recover from the violent convulsions, into which it had been thrown by the immigration of the barbarians. The same Arabs who acted at that very period as disseminators of Indian science and as instructors of the West, were trying to destroy and to root out the people who were the representatives of that civilization. Indian Arithmetic together with the Indian figures, which the Europeans call Arabian, as they obtained them through the medium of Arabs, Indian Astronomy, with its nomenclature, Indian Medicine, Indian Philosophy, all these were eagerly studied by the Arabs, then the most civilized and learned people of the world. But though the Mussulmans were thus striving to cultivate these Indian studies and to reintroduce them into the very West, from whence that civilization had originally started, they reduced India to that unhappy condition, in which it was found when the first Europeans put their foot on this country.

It were untrue to contend that the immediate result of European intervention could be considered to have been beneficial to India. The first and most important reason which directed the eyes of the Western people to this country

was the desire of acquiring wealth and power, for the idea of the enormous riches of India had strangely taken hold of the mind of foreign nations. Rank egotism can never act benevolently, and the newcomers showed only benevolence towards themselves and malevolence against all others. The behaviour of the Portuguese towards the Natives; the introduction of the Inquisition; the jealousy of Dutch, English and French against each other, and the means to which they stooped to conquer, could not but create a prejudice against the Europeans. But as soon as India was fairly in the hands of a European nation, the English, that nation did try to obliterate the traces of the bloody conflicts, and the blessings of peace began to manifest themselves in this country, as they have never been experienced before.

And this prosperous state originated from the commercial intercourse between the West and the East, which, though at the beginning, fraught with disastrous events, was the means of introducing to this country, when at its lowest prostration, the arts, sciences and culture of the West.

Let us hope, that they will remain here for the good of this country and its inhabitants and that the previous oscillations of civilization will cease and one high and moral culture comprise and unite us one and all!

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