



Vishwaguru

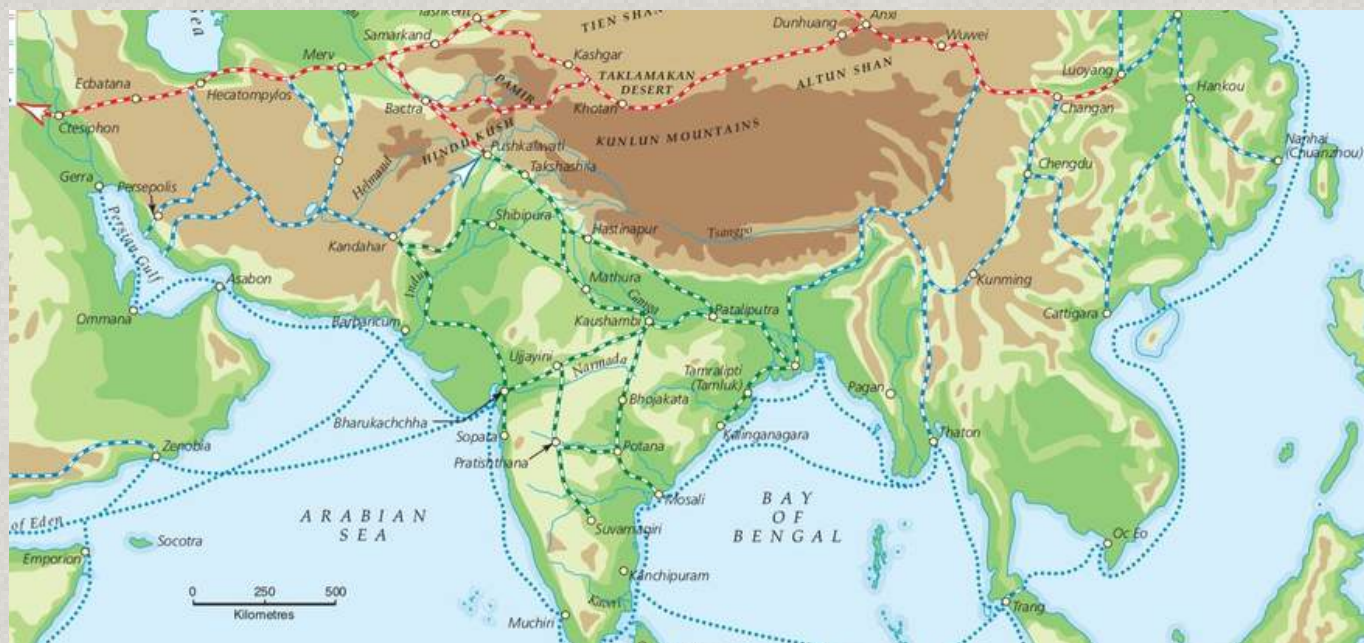
DAKSHI

Special Edition Newsletter

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Vol. 1

Ancient India & Global Interactions



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"Let us remember,... That India was the motherland of our race, and Sanskrit, the mother of Europe's languages; that she was the mother of our philosophy, mother, through the Arabs, of much of our mathematics, mother, through Buddha, of the ideals embodied in Christianity, mother, through the village community, of self-government and democracy. Mother India is in many ways the mother of us all."

- Mark Twain

"India is the birthplace of two of the world's great religions, Hinduism and Buddhism. Today, nearly half the world's population live in countries whose cultural development has been influenced by one or both of these religions. The influence of ancient India was not just limited to its religions. Indian mathematicians were the first in the Old World to discover the mathematical value of zero, and gave the world quadratic equations and the now universally used system of 'Arabic' numerals. The alphabets of Tibet, Mongolia and all of the Southeast Asian languages are of Indian origin. Yet despite their wide-ranging influence, the early civilizations of the Indian subcontinent are the least well known of any of the ancient civilizations."

Disclosing the Ancient Knowledge Systems and Heritage of India



DAKSHI's NEWSLETTER

Vol. 1

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Dear Readers,

We are pleased to introduce the first volume of Dakshi's newsletter, a dedicated platform for exploring the vast and rich tapestry of Indian knowledge systems and heritage. This marks the beginning of an exciting new series, where we aim to delve deeply into the historical, cultural, and intellectual legacies that have shaped India and influenced the world at large. The inaugural edition takes a significant step by focusing on ancient India and its far-reaching global interactions, setting the tone for a broader exploration in the future.

India's contribution to global knowledge and culture is vast, and its ancient civilization is a beacon of intellectual richness and spiritual depth. From the Vedic traditions to the philosophical debates of the Upanishads, from the scientific advancements in mathematics and astronomy to the profound wisdom embedded in its literature and arts, India has long been a cradle for knowledge that transcends time and borders.

One of the central themes of this volume is the interaction between ancient India and other global civilizations. The Silk Road, maritime trade routes, and intellectual exchanges created a dynamic flow of ideas, art, and commerce. From the dissemination of Indian numerals and the concept of zero to the spread of Buddhism across Asia, the far-reaching influence of Indian thought is evident in many parts of the world. This volume will explore these global connections, highlighting how ancient Indian scholars and sages engaged with their counterparts in Persia, Greece, China, and beyond, contributing to a shared human heritage of knowledge and wisdom.

As we launch this newsletter, we are also setting the stage for the many volumes to come. In future editions, Dakshi will continue to delve deeper into the various facets of India's ancient knowledge systems. Each volume will seek to offer readers an enriching perspective on India's historical and intellectual legacy, showing how ancient wisdom is not only relevant today but also continues to inspire contemporary thought and innovation.

We hope that Dakshi's newsletters will spark curiosity, provide new insights, and encourage further exploration of India's vast and enduring heritage. The journey we are beginning together is one of learning, reflection, and discovery—one that will take us through the millennia of India's vibrant history and offer timeless knowledge to the world.

Thank you for joining us on this exciting journey. We look forward to sharing the unfolding volumes and the wealth of knowledge they contain.

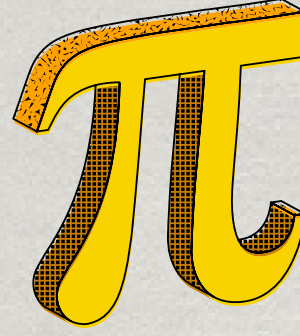
– Akshit Kumar Bhaduria

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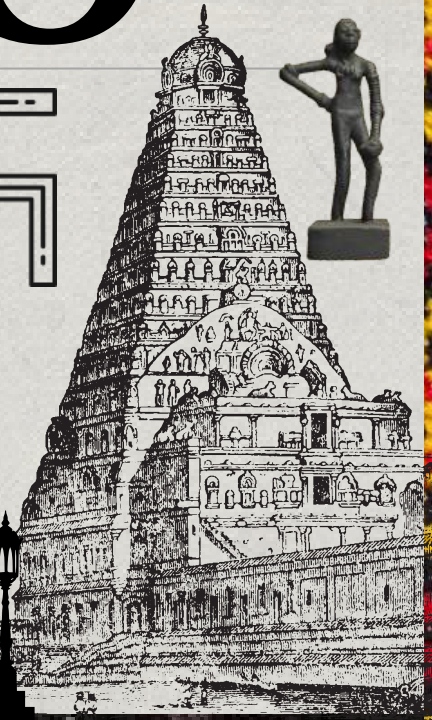
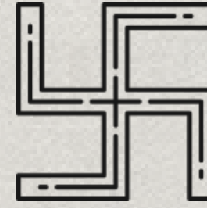


Vishwaguru

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संस्कृतम्



Disclosing the Ancient Knowledge Systems and Heritage of India



Foreign Travellers

"The ancient Indian mind was a fertile ground for philosophical inquiry and spiritual exploration." Let's explore the views of Travellers about India.

Honesty was the state's distinguishing quality, and it thrived in an environment of abundant morality and sparse brutality. People developed wholesome habits and had happy lives. High levels of life were the outcome of efficient trade and government. Slavery did exist, Indian Dasa, appeared to be acting more voluntarily when granting Megasthenes certain privileges. They might have passed for state personnel in his eyes.

- Megasthenes

India, was as extensive "as the rest of Asia; the people as numerous as all "the rest of mankind; and there was no nation beyond them, or more to the east." The kings of the Indians, according to him, are not allowed to be in- toxicated. "None of the Indians," he says, "ever suffer head- "ache or tooth-ache, or maladies of the eyes, or have " pimples about the mouth. They live to the age of "120 or 130, and some even to 200."

- Ctesias

The inhabitants of Magadha are rich and prosperous, and vie with one another in the practice of benevolence and righteousness. Indians were quite generous and believed firmly in the concept of charity. Wealthy individuals would regularly donate to monasteries, temples and religious endowment funds. Law and order were maintained, and the masses were law-abiding in nature. People were content and satisfied with their lives and loved to spend time with their families.

- Fa-hien

"The universities of India are grand institutions where monks, scholars, and students gather to study. The famous Nalanda monastery, with its vast libraries and scholars, is the most renowned center of learning. Here, I found scholars of great renown, engaged in profound studies of the scriptures. They live in harmony with the teachings of their faith."

- Hsuen Tsang



Foreign Travellers

"India's rich cultural heritage is a treasure trove of wisdom, waiting to be discovered and its tradition of knowledge and learning is a beacon of light, guiding us towards a brighter future."

"The Indians are a people who possess a deep knowledge of the sciences and have developed numerous branches of learning that surpass the science of the Greeks and Persians in many aspects. The medical science of the Indians is based on extensive observation and theory. Their texts, which are full of details and practical knowledge, are of great value. (Kitab al-Hind, Chapter 8, Translation by E. C. Sachau).

- Al Beruni

"The people of India have attained a level of knowledge in the sciences that is not found elsewhere, and their wisdom surpasses that of other peoples in some matters. They are masters in the study of the stars, the heavens, and in the knowledge of the sciences of medicine. Some books are translated into Arabic. Many of these works have enriched our own science and philosophy." In Muruj al-Dhahab.

- Al-Masudi

"India is a very large and rich province, and it is the most beautiful and productive in the world. The people are wealthy and possess a great deal of valuable commodities like spices and gems. In this land, there is great abundance of rice, and the people are skilled in the cultivation of it... they have great skill in astronomy. "In this province of India there are very great riches...there is much gold and many fine jewels, and pearls of great size and beauty." (From The Travels of Marco Polo).

- Marco Polo

"I have seen in India men who are well-versed in the sciences of astronomy and mathematics, and they make precise calculations in these fields. The food of India is rich in spices, and the people of this land have a great love for food that is seasoned with pepper and other strong spices." (Rihla, Volume 2, Chapter on India).

- Ibn Battuta



Indus Valley Civilisation

The IVC's interactions with other contemporary civilizations, such as Mesopotamia, Persia, and Central Asia, can be visualized through both architectural evidence and textual references found inside and outside of India. Here's an exploration of these interactions:

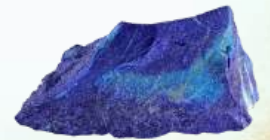
Meluhha

Sumerian texts from around 2300 BCE mention Meluhha as a distant land known for its wealth and trade relations. In these texts, Meluhha is described as a source of timber, ivory, gold, and lapis lazuli. The lapis lazuli mentioned in these records is believed to have come from the Indus Valley region (modern-day Afghanistan, which was part of the broader Indus cultural sphere).



Lapis Lazuli

Akkadian sources from around 2300 BCE also mention trade with Meluhha. These texts describe goods like lapis lazuli (likely sourced from Afghanistan or the Indus region) and other materials that were likely traded via maritime routes across the Persian Gulf. Lapis lazuli was mined in the Badakhshan region of Afghanistan, which is located near the Harappan colony of Shortugai.



Garnelian Bead

The Harappans were also trading with the Oman peninsula. An etched carnelian bead of the Harappan type was found at Umm-an-Nar. Maysar, an excavated copper-smelting site, has yielded evidence (e.g., pottery decorations and motifs on a seal) that suggests Harappan influence. 'Etched' carnelian bead from the Indus valley found in tomb N at Hili Garden.



Mudbricks

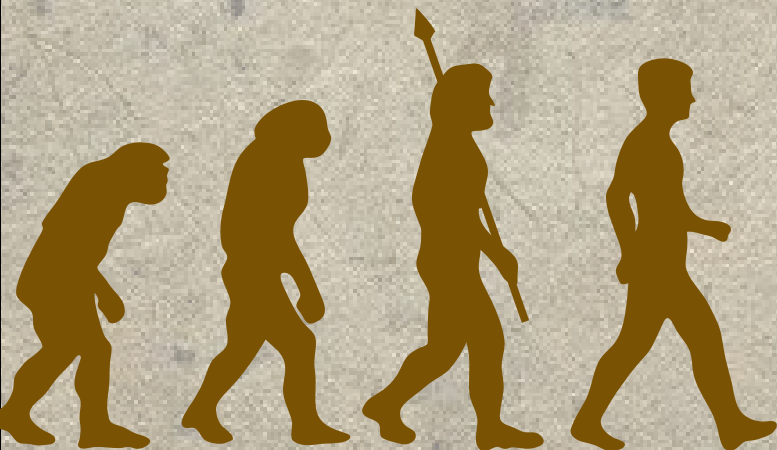
Indus Valley Civilization and the Bactria-Margiana Archaeological Complex (BMAC). While direct contact between the Indus Valley and Bactria remains difficult to prove conclusively, both civilizations were part of a much larger network of exchange in Central Asia. Both civilizations used mudbrick as a primary construction material, and large, well-planned cities suggest a shared architectural tradition, which may have been influenced by trade or cultural exchange.



DID YOU KNOW?



The IVC had an extensive trade network, reaching as far as Mesopotamia, Persia, and Central Asia. They traded items like cotton, wheat, barley, luxury beads, and precious metals such as gold and copper. It shows that Indus Valley Civilisation is Very Prosperous as well.





Indus Valley Civilisation

The Harappan civilization was the first urban culture in South Asia. The urban phase of the Harappan culture emerged from the proto-urban early Harappan phase.

Dancing Girl

She represents a very thin woman standing with her right hand on the back of her hip and left hand resting on her left thigh, just above the knee. She may have once held some object in this hand. She wears a necklace and has 24-25 of bangles on her left arm and just 4 on her right arm. John Marshall named her the 'dancing girl' because he thought she had the air of a semi-impudent 'nautch girl', hand on hip, beating time to the music with her feet.



Shortughai

Shortughai, Afghanistan also has some unique features. A ploughed field covered with flax seeds was found in an area unsuitable for irrigation, showing the practice of dry farming. Small irrigation canals drawing on the water of the Kokcha, located about 25 km away, were found in other parts of the site. We also found etched camelian beads; flint micro-blades and drill heads; shell bangles; and mud-bricks of the typical Harappan size.



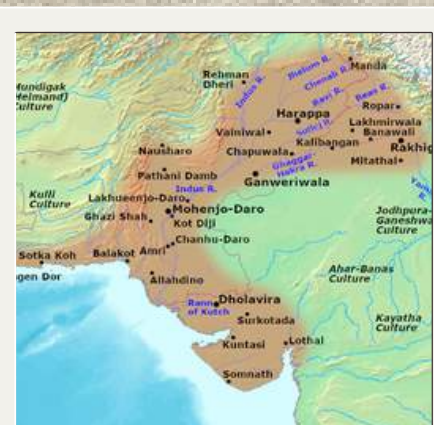
Pashupati Seal

A figure depicted seated cross-legged in a "yogic" stance, often accompanied by animals, has been viewed as a portrayal of "proto-Shiva," that is, an early version of one of Hinduism's principal deities. In several seals of the Indus civilization. Made of steatite, it is a rather small object measuring a mere 3.4cm in height, 3.4cm in length and 1.4 cm in width.



Swastika

This seal from Harappa, Punjab depicts multiple swastikas facing in both directions. The other side of the seal shows a bicephalic deity facing a tiger while beating a drum. This seal is dated to around 2500-2000 BCE.



Map of Indus Valley Civilisation



Vedic Age

The Vedic Age was not an isolated period but was marked by interactions with various regions, especially through trade, migration, and cultural exchanges.

"The theory of an Aryan invasion, which was carefully constructed by British scholars, has no firm historical basis. It was part of the British propaganda to divide and rule India, portraying the Indian people as having been constantly invaded and subdued by foreign powers. The so-called Aryan race never invaded India. The people who call themselves Aryans were the original inhabitants of India, and the so-called Dravidians were simply their brethren who had settled in the southern parts of the country."

- V.D. Savarkar

The 'battle of ten kings' (dasharajna), recounted in Book 7 of the Rig Veda Samhita may be based on an actual historical incident. In this battle, the Bharata chief Sudas, grandson of Divodasa, fought against a confederacy of 10 tribes. This shows an interaction among the tribes. The mention of the Purus, their former allies, as a part of this confederacy indicates that political alliances were fluid and shifting.

- Upinder Singh

Both the Vedic and the Zoroastrian religions feature a pantheon of deities, with gods such as Varuna in Vedic texts being similar to Ahura Mazda in Zoroastrianism. Other shared elements include the role of priests, ritual fire sacrifices, and the dualistic nature of their cosmologies (good vs. evil). The Vedic idea of the eternal order of the cosmos and the cycle of life and death (samsara) shares affinities with Zoroastrian cosmology.

- Mary Boyce

The evidence of the oldest literary records of the Indo-European family of languages, the Rigveda and the Avesta, as we have seen, clearly and unambiguously depicts a movement of the Indo-Iranians from the east to the west. This deals a body-blow to a very vital aspect of the theory which places the original Indo-European homeland to the northwest of Central Asia (ie. in and around South Russia), and it lends strong support to the theory that the Indo-European family of languages originated in India.

- Shrikant G. Talagiri



Vedic Age

"The Vedic people were not outsiders; rather, they were indigenous to the region and their culture evolved out of the ancient traditions of the Harappan civilization".

- Prof. BB Lal

Lal presents an alternate view, arguing that the Rigvedic people were indigenous to the Indian subcontinent and evolved out of the pre-existing cultures, such as those of the Harappan Civilization. The chapter provides an overview of previous scholarship and positions the Rigvedic people within the broader history of ancient India. He introduces the historical and archaeological evidence that supports the continuity between the Harappan culture and the Vedic people.

"The hymns of the Rigveda are not just religious chants, but also reflections on the deeper realities of the cosmos and the human condition". It also includes the Discussion on the language (Vedic Sanskrit) and its relation to Indo-European languages. The significance of hymns, such as the Nasadiya Sukta (Rigveda 10.129), for understanding cosmological questions.

"In the early Vedic society, while men dominated the political and military spheres, women had a significant role in intellectual and spiritual domains". The Vedic is a Tribal society with chiefs and priests. It also includes the emerging division of labor, which later evolved into the Varna system. The Vedic society is egalitarian in nature where Women's plays a major roles in religion and philosophy (e.g., Gargi, Maitreyi).

"The horse, once considered a marker of an alien culture, was an integral part of the ancient Indian landscape, and its presence in the subcontinent is fully compatible with an indigenous development of Vedic society". Lal notes that horses were present in the Indian subcontinent well before the traditional date of the Aryan invasion. Archaeological sites such as Kunal and Surkotada in Gujarat have yielded evidence of horse bones dating back to the period of the early Vedic texts. The early presence of horses, therefore, suggests that the Vedic people had long-standing connections with the Central Asian steppe, but it does not imply that they invaded India.

Reference:- The Rigvedic People: 'Invaders'?/'Immigrants'? by Prof. BB Lal.

Disclosing the Ancient Knowledge Systems and Heritage of India



Trade Routes

India is the richest and most splendid province in the world, India & Sri Lanka produced most of the world's pearls and gems and full of merchants and traders.

- Marco Polo

The Silk Road, a network of land routes, linked India to Central Asia, the Persian Empire, and China. India's northwestern regions, especially Taxila (in modern-day Pakistan) and Mathura, acted as crucial hubs on the western branch of the Silk Road.

Silk Route

Indian trade in the Persian Gulf region was vital, particularly through the ancient port of Oman and later Basra (in present-day Iraq). These trade routes facilitated the movement of spices, pearls, and textiles, and the Indian Ocean was a key passage for goods traveling to the Mediterranean and beyond.

Persian Gulf

The Indus Valley Civilization had sea-going vessels, and the west Harappan city of Sutkagan Dor on the Makran coast was an early maritime trading station. The island of Bahrain, known to the Sumerians as Dilmun, was a central trade depot for goods from the Indus Valley Civilization. Merchants traveled along established routes and down the Tigris and Euphrates rivers to the Persian Gulf. They also crossed land using animal labor and sledges.

Indus Valley



Maritime Route

India played a significant role in the maritime trade networks that connected it with Southeast Asia, particularly the Malay Archipelago, the islands of Indonesia, and parts of Southeast China. The Srivijaya Empire, in Sumatra, the Khmer Empire in Cambodia, and Sailendra in Java were major beneficiaries of this trade, importing Indian goods, culture, and religions, particularly Buddhism and Hinduism.

The two major trade routes of Indian subcontinent were Uttarpath of the north and north-west and Dakshinpath of the central India and the southern peninsula. Uttarpath is also referred as "Northern High Road". Dakshinpath, is often referred as "Southern High Road" connected Varanasi, Ujjain, Narmada Valley and Pratisthana (Paithan Maharashtra) and then to western coast of India, running in southern direction. Manimekalai was the presiding deity of Dakshinpath traders.

Internal Path

Deposits of rice, dal, coconuts, coriander and tamarind show that these south Indian merchants preferred their own deliciously peppery cuisine to that of Egypt, much as their successors still do today. Nearby were found huge twenty-two-pound pots containing several thousand imported Indian black peppercorns. - William Dalrymple



Trade Routes

"To other countries, I may go as a tourist, but to India, I come as a pilgrim."

— Martin Luther King, Jr

In Ashoka's inscriptions, the yavanas appear as a people who lived on the north-western borders of the Maurya empire. During c. 200 BCE-300 CE, they appear as 'westerners' involved in trade. Early Tamil literature frequently refers to them. Sangam poems mention their large ships sailing on the Periyar river, bringing in gold and wine and sailing away with cargoes of black pepper.

yavana

The Coromanadel coast soon became more important. Excavations at Berenike on the Egyptian coast, which have yielded black pepper and beads of South Indian and Sri Lankan manufacture in a 4th century CE context, reflect the flourishing East-West trade.

Berenike

The Cholas had coastal towns and ports, including Mamallapuram, Mayilappur, and Kaverippattinam. The port city of Nagapattinam was a primary hub of the Chola's maritime trade system. The Cholas had a strong maritime trade system that was a sign of their economic power and diplomatic influence. They had extensive knowledge of shipbuilding, ship-technology, shipping, and navigation.

Cholas

The activities of Chinese and Indian monks are an important part of the story of the spread of Buddhism to China. And the fact that rituals in Southeast Asian courts were dominated (as in India) by Brahmanical practices points to the presence of Brahmanas and ritual specialists in those courts. The demand for Chinese silk in the Mediterranean region was a transcontinental trade in this period.

Tianjin

Ancient Sanskrit and Pali texts refer to a land known as Suvarnavdipa or Suvarnabhumi the land of gold, associated with riches. This is usually identified with Southeast Asia. This identification is more certain in the Arthashastra, which refers to incense called kaleyaka from Suvarnabhumi, and aloeswood that came from beyond the sea. The Milindapanha also refers to Suvarnabhumi in the context of shipping ports. The Jatakas mention sea voyages from Varanasi and Bharukachchha to this land.

Suvarnabhumi



Reference:- A History of Ancient and Early Medieval India by Upinder Singh.

Disclosing the Ancient Knowledge Systems and Heritage of India



Spread of Ideas

"India will teach us the tolerance and gentleness of mature mind, understanding spirit and a unifying, pacifying love for all human beings."

- Will Durant

The Bamiyan Buddhas in Afghanistan, created between the 6th and 7th centuries CE, were once among the largest standing Buddha statues in the world. Their creation reflects the profound influence of Indian Buddhism on Central Asia.



Angkor Wat in Cambodia, originally built in the early 12th century, began as a Hindu temple dedicated to the god Vishnu before being repurposed as a Buddhist site. This reflects the deep integration of Hinduism into Southeast Asian culture.



Vāsudeva-Krishna on a coin of Agathocles of Bactria, circa 190–180 BCE. This is "the earliest unambiguous image" of the deity. Agathocles I Dicaeus was a Greco-Bactrian/Indo-Greek king, who reigned between around 190 and 180 BC, likely of the dynasty of Diodotus.



Mỹ Sơn is a cluster of abandoned and partially ruined Shaiva Hindu temples in central Vietnam, constructed between the 4th and the 13th century by the Kings of Champa, an Indianized kingdom of the Cham people.



Spread of Ideas

"In India, I found a race of mortals living upon the Earth, but not adhering to it, inhabiting cities, but not being fixed to them, possessing everything, but possessed by nothing."

— Apollonius Tyanaeus

Ralph Waldo Emerson says: "Plato was a synthesis of Europe and Asia, and a decidedly Oriental element pervades his philosophy, giving it a sunrise colour". In fact, in teaching asceticism, Plato was more of a Hindu than a Greek, because, of all nations, the Greeks were least ascetic. There is a Greek tradition that Pythagoras visited India and was influenced by ideas of India.

Bodhidharma was a semi-legendary Buddhist monk who lived during the 5th or 6th century CE. He is traditionally credited as the transmitter of Chan Buddhism to China, and is regarded as its first Chinese patriarch. He is also popularly regarded as the founder of Shaolin kung fu, an idea popularized in the 20th century, but based on the 17th century Yijin Jing and the Daoist association of daoyin gymnastics with Bodhidharma.

Al-Biruni's translations of Hindu texts, including the Vedas, provided insight into Indian religious practices and philosophy. Nishapur in present-day Iran, became a key intellectual center where scholars translated Indian works into Persian and Arabic. Al-Biruni's work reflected not only his scholarly interest but also the diffusion of Indian thought to the wider Islamic world.

Sufi mysticism, which emphasizes the inward journey and union with the divine, has roots in certain Indian spiritual practices such as meditation and asceticism. Many Sufi mystics, like Rumi and Khushro were influenced by Indian philosophical and spiritual traditions. William C. Chittick have written about the intersections between Sufism and Indian religious ideas specifically the influence of Vedantic ideas on Sufi thought.



Art & Architecture

"What is Art? It is the response of man's creative soul to the call of the Real."

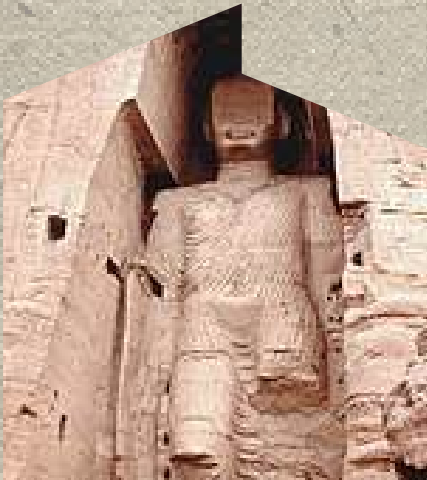
- Rabindranath Tagore

Angkor Wat



Bali

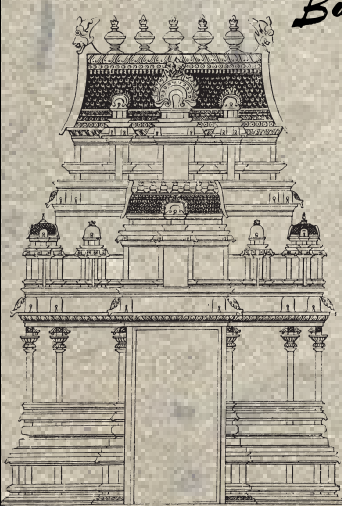
Borobudur



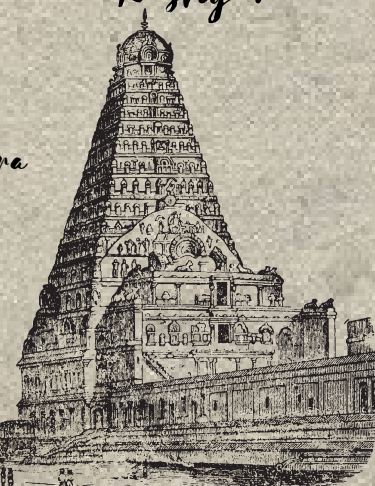
Bamiyan



Kashgar



Anuradhapura



Disclosing the Ancient Knowledge Systems and Heritage of India



Art & Architecture

"India is the One land that all men desire to see, and having seen once, by even a glimpse, would not give that glimpse for all the shows of all the rest of the globe combined."

- Mark Twain

Bali

A Pura is a Balinese Hindu temple and the place of worship for adherents of Balinese Hinduism in Indonesia. Puras are built following rules, style, guidance, and rituals found in Balinese architecture. Most puras are found on the island of Bali, where Hinduism is the predominant religion.

Angkor Wat

Angkor Wat (Cambodia): One of the most famous examples of Indian-influenced architecture, Angkor Wat was originally constructed in the 12th century as a Hindu temple dedicated to Vishnu. Its design follows the principles of Indian temple architecture, including the central tower symbolizing Mount Meru (the cosmic mountain in Hindu and Buddhist cosmology). It reflects Indian influences.

Borobudur

Borobudur (Indonesia): Built in the 9th century, Borobudur is the largest Buddhist temple in the world. The monument's architecture and design, including its grand circular terraces, are inspired by Indian stupas and Hindu-Buddhist cosmology. The reliefs around the temple depict scenes from the life of the Buddha and have strong links to Indian art and iconography.

Bamiyan

Bamiyan Buddhas (Afghanistan): The Bamiyan Buddhas, built in the 6th century in Afghanistan, were colossal statues that reflected Indian Buddhist art and iconography. The influence of Indian sculpture and architectural styles can be seen in the design of the Buddha statues and the surrounding structures, which were carved into cliffs in a manner reminiscent of Indian rock-cut architecture.

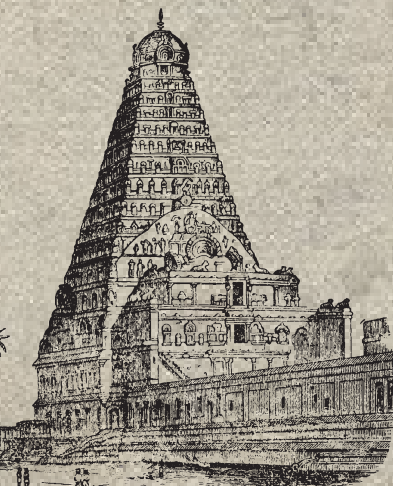
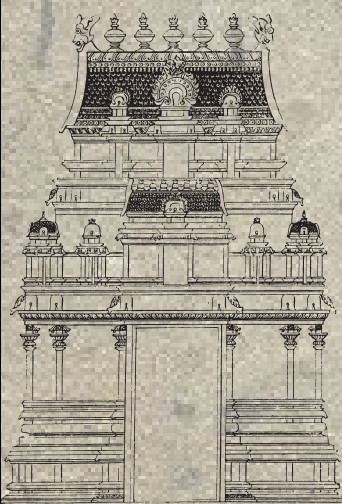


Kashgar

Kashgar and the Buddhist Temples: The ancient city of Kashgar, located at the western edge of China, was a key stop along the Silk Road. Buddhist temples and monasteries in Kashgar, dating from the 7th to 9th centuries, often employed Indian artistic traditions and architectural styles, including stupa-like structures and carvings.

Anuradhapura

The ancient city of Anuradhapura in Sri Lanka and the Dambulla Cave Temple reflect Indian architectural influences, particularly in their use of stupas (domed structures for housing relics) and intricate stone carvings, inspired by Indian Buddhist architecture.





Science & Mathematics

"We owe a lot to the Indians, who taught us how to count, without which no worthwhile scientific discovery could have been made."

- Albert Einstein

As Sindh was under the actual rule of the Khalif Mansur (AD 753-774), there came embassies from that part of India to Bagdad and among them scholars, who brought with them two books. With the help of these Pandits Alfazari, perhaps also Yaqūb ibn Tāriq, translated them. Both works have been largely used, and have exercised a great influence. It was on this occasion that the Arabs first became acquainted with a scientific system of astronomy. They learned from Brahmagupta earlier than Ptolemy.

- Alberuni

The Fibonacci numbers: This one might come as a surprise! The Fibonacci sequence first appeared in Indian mathematics as mātrāmeru, mentioned by Pingala in connection with the Sanskrit tradition of prosody. Later on, the methods for the formation of these numbers were given by mathematicians Virahanka, Gopala and Hemacandra, much before the Italian mathematician Fibonacci introduced the fascinating sequence to Western European mathematics.

The Sridharacharya equation is given by $ax^2 + bx + c = 0$, where a, b, c are real numbers and $a \neq 0$. The solution of the Sridharacharya equation is given by the Sridharacharya formula which is $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$. Used to solve the Quadratic Equations. Śrīdharācārya (8th-9th century) was an Indian mathematician, known for two extant treatises about arithmetic and practical mathematics, Pāṭīganīta and Pāṭīganīta-sāra, and a now-lost treatise about algebra, Bījaganīta.

The Algebraic method formerly considered to have been invented by Al Khowarizimi can now be seen to stem from Hindu sources. The place-value system involving the use of nine numerals and a zero as place-holder is undoubtedly of Hindu origin and its transmission to the West had a profound influence on the whole course of mathematics. Al-Khowarizmi (ca. 840) contributed a work on algebra and an account of the Hindu-Arabic numerals including the use of zero as a place-holder.

- Margaret E. Baron

The next major contribution to trigonometry came from India. In the sexagesimal system, multiplication or division by 120 (twice 60) is analogous to multiplication or division by 20 (twice 10) in the decimal system. The first table of sines is found in the Aryabhatīya. Its author, Aryabhata I (c. 475-550), used the word ardha-jya for half-chord, which he sometimes turned around to jya-ardha ("chord-half"); in due time he shortened it to jya or jīva. Later, when Muslim scholars translated this work into Arabic,

- R.W. Barnard

Brahmagupta also demonstrated rules for working with negative numbers. He referred to positive numbers as fortunes and negative numbers as debts. He wrote down rules that have been interpreted by translators as: "A fortune subtracted from zero is a debt," and "a debt subtracted from zero is a fortune". Brahmagupta also knew that "The product of a debt and a fortune is a debt" – a positive number multiplied by a negative is a negative.



Science & Mathematics

"Gravitation was known to the Hindus (Indians) before the birth of Newton.

The system of blood circulation was discovered by them centuries before Harvey was heard of." - P. Johnstone

Manka, an Indian physician at the court of Harun al-Rashid translated the Sushruta (the classical (Gupta-era) Sanskrit text on medicine) into Persian. He is mentioned as a distinguished Indian physician by Ibn Abi Usaybi'ah in his famous book 'Uyun al-Anba fi Tabaqat al-Atibba (Fountains of Information on the Classes of Physicians). It is related that once when Caliph Harun al-Rashid (CE 786-809) fell seriously ill and his court physicians failed to cure him, Manaka was invited from India to treat him on the initiative of a certain Abu 'Amr 'Ajami.

- H.A. Hamid

Atomism, or the concept that matter is ultimately made of indivisible building blocks, appeared in India a few centuries BCE as part of philosophical speculations, in particular in the Vaiśeṣika, one of the six philosophical systems of ancient India. The author of the Vaiśeṣika Sūtras came to be known as Kaṇāda. The Vaiśeṣika system identified nine types of substance(dravya): (1 to 5) the five elements (prithvi, Jal, tejas, vāyu, ākāśa), time (kāla), space or direction (dik), the mind (manas), the spirit or knower (ātman).

Arthasastra of Kautilya contains very interesting passages relating to the harvesting and management of crops and crop diseases and very many aspects of agroforestry. Brhat Samhita of Varahamihira composed in the 6th Century CE has an entire chapter devoted to Vrkṣayurveda. Agni Purana also includes a chapter on the topic. Cakrapanidatta, a commentator of the celebrated Ayurvedic text, Caraka Samhita, puts forth the theory that plants have feelings and cognitive abilities.

Abu Rayhan al-Biruni (973-1050 CE), renowned as the Ptolemy of his age, was also full of appreciation for the medical wisdom of ancient India. He derived his knowledge about the Indian medical system by studying the above-mentioned Charaka-Samhita. In his rare book on drugs titled Kitab al-Saydanah fi al-Tibb (Book of Pharmacy in Medicine), he referred to the skill and wisdom of Indian physicians and their cures by using aconite in case of haemorrhoids.

- N.K. Shrivastava

"We knew the world would not be the same. A few people laughed, a few people cried, most people were silent. I remembered the line from the Hindu scripture, the Bhagavad-Gita; Vishnu is trying to persuade the Prince that he should do his duty and, to impress him, takes on his multi-armed form and says, "Now I am become Death, the destroyer of worlds." I suppose we all thought that, one way or another."

- J. ROBERT OPPENHEIMER

India was a major innovator in the field, producing two highly advanced types of iron. The first, wootz steel, produced in south India from about 300 BCE, was iron carburized under controlled conditions. Exported from the Deccan all the way to Syria, This Indian steel was called 'the wonder material of the Orient'. A Roman historian, Quintus Curtius, recorded that among the gifts which Alexander the Great received from Porus of Taxila (in 326 BCE), there was some two-and-a-half tons of wootz steel - it was evidently more highly prized than gold or jewels!



Food and Textiles

"I believe that where there is pure and active love for the poor there is God also. I see God in every thread that I draw on the spinning wheel."

– M.K. Gandhi

Mesopotamian writings from 2500–1900 BCE mention clothes regularly sent to Mesopotamia from Meluhha, the Sumerian name for the Indus Valley Civilization. The earliest surviving Indian cotton threads date back to around 4000 BC. Dyed fabrics from the region are documented as far back as 2500 BC.



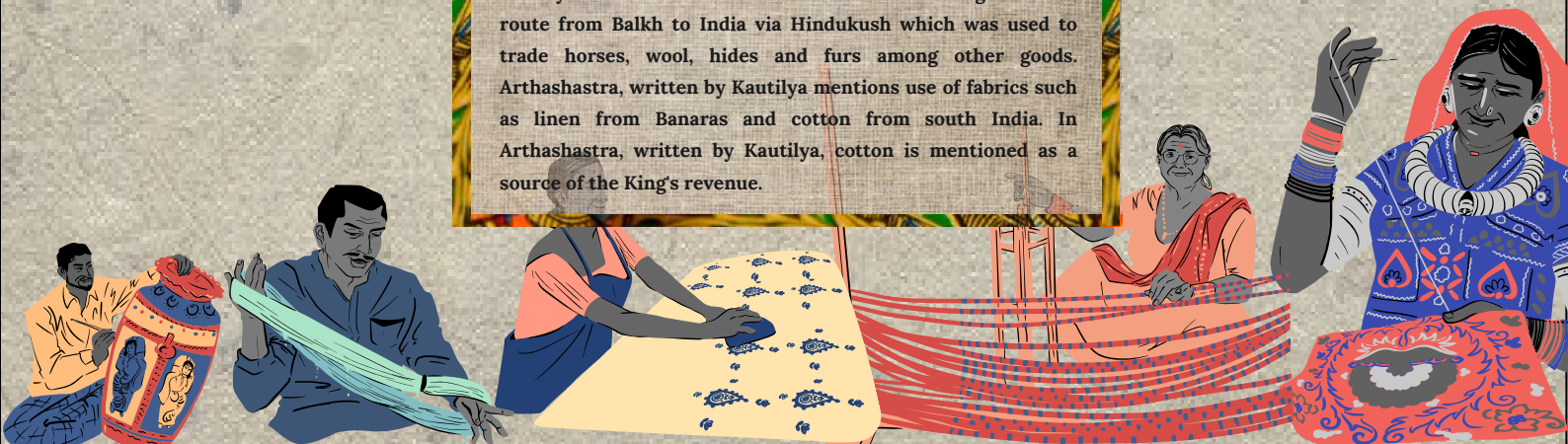
References to weaving found in the Rig Veda which describes a weaver as a vasovaya. References to embroidery found in Vedic texts which mentions pesas or an embroidered garment probably worn by female dancers. Apastamba Srauta Sutra, a text from the Vedic age, refers to printed fabric or chitranta. Vedic Samhitas frequently mention woollen threads made up of goat's hair and sheep's wool.



Evidence of textiles is lacking for the 1000 years following the decline of ancient sites of the Indus Valley but the Greek physician Ctesian's writing in the early 5th century BCE mentions the popularity of brightly coloured Indian textiles among Persians indicating that Indian fabrics were exported even after this. Alexander's successor Seleucus made expeditions to obtain goods from India. Meanwhile Ptolemy Soter, another of Alexander's generals took possession of Egypt and strove to improve trade with India.

Cotton products from Gujarat dating back to the 5th century AD were found in the tombs at Fostat, Egypt. In fact, cotton textiles were also sent to China during the peak of the silk route trade days. In the 13th century, south India also started exporting silk fabrics to Indonesia. Well before the Europeans step foot here, India had been exporting printed cotton fabrics to foreign countries. Later, Indian textiles were directly exported to Europe, where they became very fashionable and popular.

Kautilya's Arthashastra mentions Haimavatamarga or the route from Balkh to India via Hindukush which was used to trade horses, wool, hides and furs among other goods. Arthashastra, written by Kautilya mentions use of fabrics such as linen from Banaras and cotton from south India. In Arthashastra, written by Kautilya, cotton is mentioned as a source of the King's revenue.





Food and Textiles

"Be Thankful For All Food, It Is Brahman. His Universal Energy Is Transmuted Into Our Individual energy and helps us in all that we do. "

- Swami Vivekananda

Thai cuisine was influenced by Indian cuisine as recorded by the Thai monk Buddhadasa Bhikku in his writing 'India's Benevolence to Thailand'. He wrote that Thai people learned how to use spices in their food in various ways from Indians. Thais also obtained the methods of making herbal medicines (Ayurveda) from the Indians. Some plants like sarabhi of family Guttiferae, kanika or harsinghar, phikun or Mimusops elengi and bunnak or the rose chestnut etc. were brought from India.

Tandoor ovens were first discovered approximately 2600 BC in the Indus Valley Civilization, one of the world's oldest known civilizations. Archaeologists have discovered clay oven remnants with signs of cooked food at sites such as Kalibangan in India and Harappa in current day Pakistan. Ancient civilizations in Egypt and Mesopotamia also employed the tandoor oven and adoption of the tandoor in Middle East which had originated in northwestern India. It is believed that tandoor was originated in India inspite of this we have less evidences to prove this.

Indian cuisine reflects an 8,000-year history of various groups and cultures interacting with the Indian subcontinent, leading to diversity of flavours and regional cuisines found in modern-day India. Later, trade with British and Portuguese influence added to the already diverse Indian cuisine. Another reason for the popularity of Indian cuisine is evolution of a large number of distinct diaspora and fusion Indian cuisines. Indian cuisine is very popular in Southeast Asia, due to the strong Hindu and Buddhist cultural influence in the region.

The Greek king Seleucus during his campaign in India (305-303 BC), mentioned that rice with pulses is very popular among people of the Indian subcontinent. Strabo also notes that Indian food mainly consisted of rice porridge and a beverage made of rice, presently called arak. The Moroccan traveler Ibn Battuta mentions khichdi as a dish in India composed of rice and mung beans, during his stay around 1350. khichdi is described in the writings of Afanasiy Nikitin, a Russian adventurer who travelled to the Indian subcontinent in the 15th century.

Filipino cuisine, found throughout the Philippines archipelago, has been historically influenced by the Indian cuisine.[43] Atchara of Philippines originated from the Indian achar, which was transmitted to the Philippines via the acar of the Indonesia, Malaysia and Brunei. Indian influences can also be noted in rice-based delicacies such as bibingka.



Disclosing the Ancient Knowledge Systems and Heritage of India



Games and Sport

"Duty is in my right hand and the fruits of victory in my left."

- Atharvaveda

Chaturanga - The precursor of chess originated in India during the Gupta dynasty (c. 280-550 CE) or may be much before. Both the Persians and Arabs ascribe the origins of the game of Chess to the Indians. The words for "chess" in Old Persian and Arabic are *chatrang* and *shatranj* respectively - terms derived from *caturaṅga* in Sanskrit

Snakes and Ladders in its traditional form is called *Paramapadam* or 'Steps to Heaven' and symbolises reaching God through virtuous acts or going down to hell because of vices like greed. It originated in India as *Moksha Patam* or *Parama Padam* to teach Hindu Dharma and values to children. British stole it and patented it as *Snakes and Ladders*.

Bodhidharma was a semi-legendary Buddhist monk who lived during the 5th or 6th century CE. He is traditionally credited as the transmitter of Chan Buddhism to China, and is regarded as its first Chinese patriarch. He is also popularly regarded as the founder of Shaolin kung fu, an idea popularized in the 20th century. Bodhidharma is said to have transmitted his knowledge of the Mahayana doctrine and the martial arts. Malay legend holds that he introduced forms to silat.

Pachisi originated in India by the 6th century. The earliest evidence of this game in India is the depiction of boards on the caves of Ajanta. A variant of this game, called *Ludo*, made its way to England during the British Raj. It is a cross and circle board game that originated in Ancient India. It is described in the ancient text *Mahabharata* under the name of "Pasha".

Ronojoy Sen speculates in his book *Nation At Play* that kabaddi originated during the Vedic period (between 1500 BC and 500 BC). There are accounts of Gautama Buddha and Lord Krishna having played an ancient form of the sport. According to the sport's origins, kabaddi is a sport developed centered on *Jallikattu*. A player going to the opposition is treated like a bull. It is like taming a bull without touching it, as it is mentioned in *Sangam Literature* that the game called *Sadugudu* has been practised for ages. There are also accounts of kabaddi having been played in Iran 2,000 years ago.

Ganjapa, a card game crafted in Odisha, is a version of the one we are familiar with today and its origins can be traced back to Persia and the Mughal court of Babur. The game is characterised by the use of a pack of circular *Pattachitra*-painted cards. Suits are colour-coded, each containing 10 numbered cards, a *vazir* and the highest-value player, the king, usually painted sitting in a cross-legged posture. While this is your most basic suit, special edition *Ganjapa* cards also depict godly characters from Hindu mythology and the epics. *Ramayana* and *Vishnu's Dashavatara* are popular themes.





Universities

"Aano bhadra krtavo yantu vishwatah; Let noble thoughts come to me from all directions." - *Rigveda*

Faxian's travels extended from 399 to 414 CE and were confined to northern India. Xuanzang left his home in 629 CE and spent over 10 years travelling the length and breadth of the country. Yijing, another 7th century Chinese traveller, lived for 10 years in the great monastery of Nalanda. According to the accounts of Xuanzang, Nalanda had a very tough entrance examination. - *Nalanda*

Buddhist literature, especially the Jatakas, mentions it as the capital of the kingdom of Gandhara and as a great center of learning. Greek historians accompanying the Macedonian conqueror described Taxila as "wealthy, prosperous, and well-governed." Taxila was situated at the pivotal junction of South Asia and Central Asia. Its origin as a city goes back to c. 1000 BCE. - *Taxila*

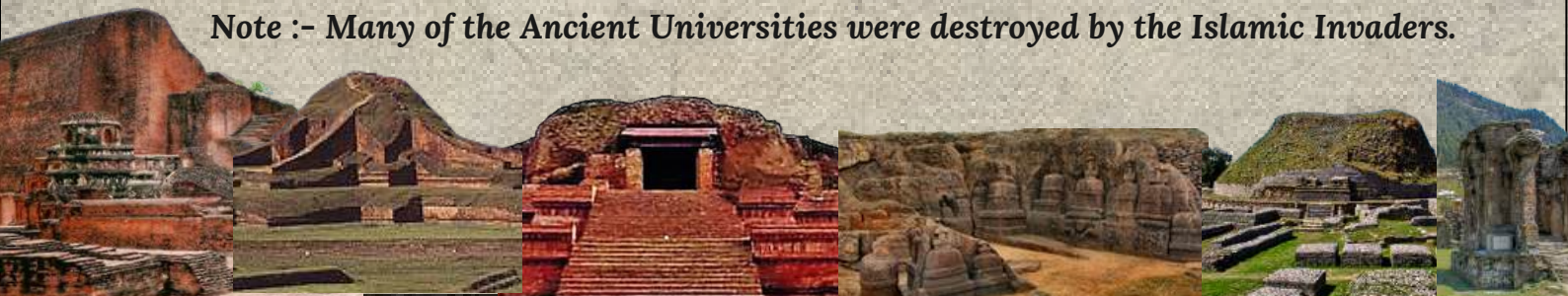
Pushpagiri was an ancient Indian mahavihara or monastic complex located atop Langudi Hill (or Hills) in Jajpur district of Odisha, India. Pushpagiri was mentioned in the writings of the Chinese traveller Xuanzang (c. 602 - c. 664) and some other ancient sources. The visit of Xuanzang indicates that Pushpagiri was an important Buddhist site in ancient India. Along with Nalanda, Vikramashila, Odantapuri, Takshashila and Vallabhi, it is believed to be a major ancient centre of learning. It flourished between 3rd and 11th centuries CE. - *Pushpagiri*

Vikramashila was a Buddhist monastery situated in what is now modern-day Bihar in India. It was founded by King Dharmapala between the late eighth and early ninth century. Vikramashila Mahavihara was a center of learning that attracted students and academics from far and wide, including Tibet, China, Korea, and Central Asia. The Shailendras of Indonesia also built a monastery in the complex. - *Vikramashila*

Sharada Peeth temple university was once one of the most important centers of learning in ancient India until the 12th century with scholars such as Adi Shankara, Kalhana, and Virotsana. It is responsible for the development and popularisation of the Sharada script. Many major Sanskrit manuscripts were written here, and it was a significant location for Sanskrit academics. It was founded in 237 BC during the reign of Ashoka. According to one account of the temple's construction, it was built during the reign of the Kushans. It was visited by many Tibetan scholars as well. - *Sharadapeeth*

According to Bu-ston, however, the Odantapuri monastery was built by Gopala's son and successor, Dharmapala; while according to Taranatha, it was founded by either Gopala or Devapala. Odantapuri was part of a network of five Mahaviharas in eastern India. The others were Nalanda, Vikramashila, Somapura, and Jagaddala. Tibetan sources indicate that the 8th century Samye monastery, which was the first Buddhist monastery in Tibet, was modelled upon Odantapuri (which in turn was modelled after Sumeru and the four dvipas). - *Odantapuri*

Note :- Many of the Ancient Universities were destroyed by the Islamic Invaders.



Disclosing the Ancient Knowledge Systems and Heritage of India



"For a millennium and a half, India was a confident exporter of its diverse civilisation."

- William Dalrymple



The Golden Road:

How Ancient India Transformed the World.

- William Dalrymple

This book, which delves into India's historical and cultural influence on global trade, commerce, and civilization, is a complex amalgamation of historical narrative, travelogue, and academic analysis. In "The Golden Road", Dalrymple seeks to illuminate how ancient India's rich traditions, vibrant trade routes, and unique intellectual contributions shaped not only the Eastern world but also had lasting effects on Western civilization. However, while the book succeeds in offering a panoramic view of India's ancient world, there are several layers to its analysis that invite critical reflection.

The Golden Road is a broad-reaching exploration of India's role in the global history of commerce, culture, and knowledge. Dalrymple connects India's ancient civilization with the key global networks of trade and cultural exchange. The title itself evokes the idea of the "Silk Road," a historical network of trade routes that facilitated the exchange of goods, ideas, and cultures between the East and the West. The "Golden Road," in Dalrymple's context, refers to the trade routes that crisscrossed the Indian subcontinent, from the coastlines of Kerala to the bustling markets of ancient Baghdad, from the Indo-Gangetic plains to the highlands of Tibet. These trade routes were not just about physical goods like spices, textiles, and precious metals, but also about the movement of ideas, philosophies, and religious doctrines.

Dalrymple traces India's involvement in these routes through the lens of ancient empires such as the Mauryas, the Guptas, and the Pandyas, among others. He examines how India, through these complex networks, disseminated its ideas of science, mathematics, religion, and philosophy. The book also addresses the role of Indian merchants, scholars, and monks who became cultural ambassadors of the Indian subcontinent, influencing distant civilizations. For instance, the spread of Buddhism into China, Central Asia, and beyond is a key theme in the narrative, showcasing India's intellectual and religious exports.



"India is the forgotten heart of the ancient world."

- William Dalrymple



The Golden Road:

How Ancient India Transformed the World.

Dalrymple's approach in 'The Golden Road' is both scholarly and accessible. He often relies on a narrative style, weaving together historical anecdotes, cultural insights, and travel observations. His engaging writing style keeps the reader connected to the historical events, often emphasizing the human elements in the exchanges along these ancient trade routes. Yet, the book can be challenging at times due to the vast range of information and the sometimes dense descriptions of historical and cultural contexts.

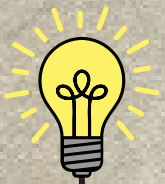
One of the book's standout strengths is its ability to bring to life the complexity and scale of ancient India's interactions with the world. Dalrymple's command of historical facts and his ability to contextualize them within broader geopolitical and cultural movements is impressive. Dalrymple's description of the landscapes, the people, and the cultures along the ancient trade routes offers the reader a vivid portrait of the historical world he is describing. Despite the book's many strengths, there are areas that could be seen as limitations or opportunities for further refinement. One of the primary critiques revolves around the book's scope and the way it handles the complex subject matter.

Dalrymple, at times, seems to oversimplify or gloss over the complexities of the historical relationships between India and other civilizations. For instance, the trade networks in Central Asia or the Silk Road are discussed in broad strokes, without delving deeply into the specifics of the geopolitical or cultural contexts of those regions. William Dalrymple's 'The Golden Road' is a valuable and thought-provoking contribution to the growing body of literature exploring India's ancient global influence.



"India is not a nation, nor a country. It is a subcontinent of nationalities."

- M.A Jinnah



India's Ancient Shipbuilding: Indian shipbuilders in ancient times were known for their advanced naval technology, and Indian ships called "Dhows" sailed as far as East Africa, trading textiles, spices, and even knowledge of astronomy.



Spices in the Roman Empire: Roman emperors were obsessed with Indian black pepper, which was so highly valued that it was sometimes used as a form of currency and as tribute to the Roman elites from Indian traders.

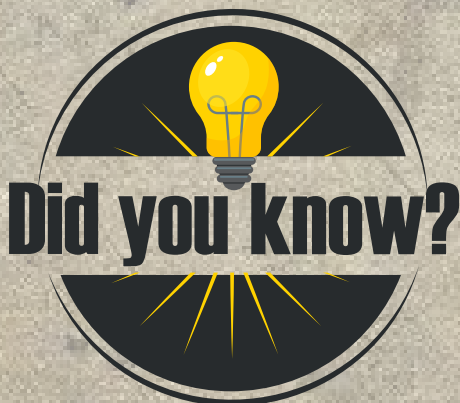
India's Role in the Spice Trade: India was the epicenter of the spice trade long before European explorers "discovered" the spice islands. Ancient Indian merchants were already trading cloves, nutmeg, and cinnamon with kingdoms in Africa, the Middle East, and Southeast Asia.



Indian cotton, silk, and pepper were highly prized by civilizations; the Roman Empire even had a "spice trade deficit," importing more than it exported.

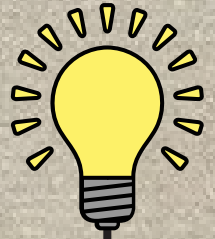


India not only exported goods but also ideas. Buddhism, born in India, spread to Central Asia, China, and beyond through the Silk Road, influencing cultures far and Along with Buddhism, Hinduism and Jainism also spread all over the world.





"Antah Asti Prarambh, The end is also the beginning", life is cyclical, and every ending is the start of something new."
- Traditional



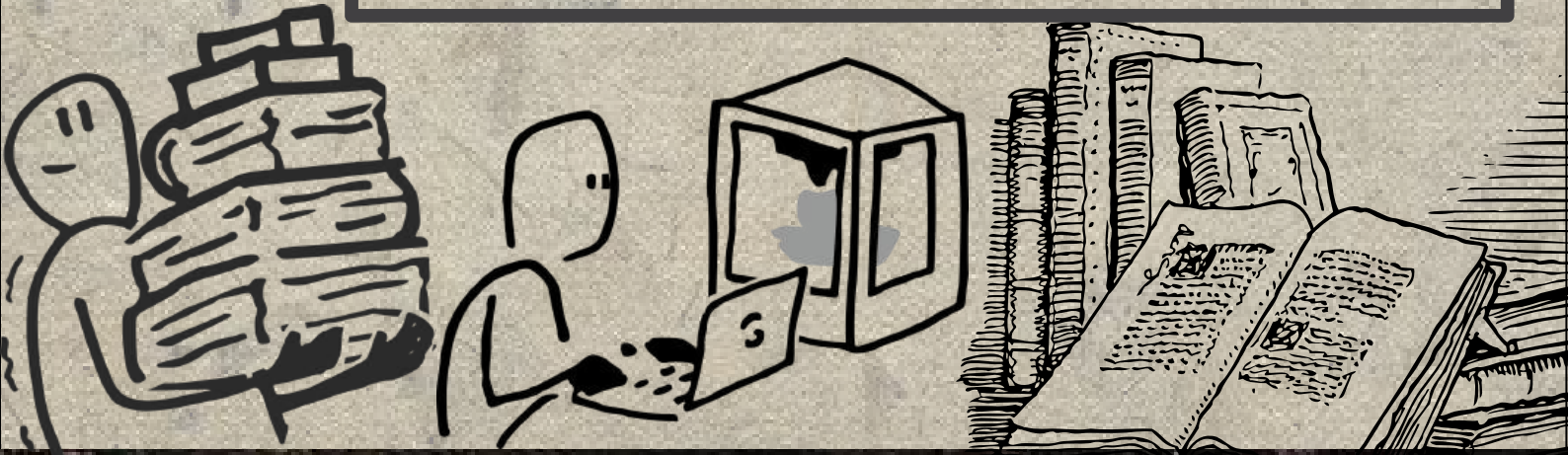
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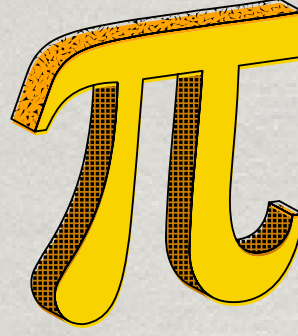
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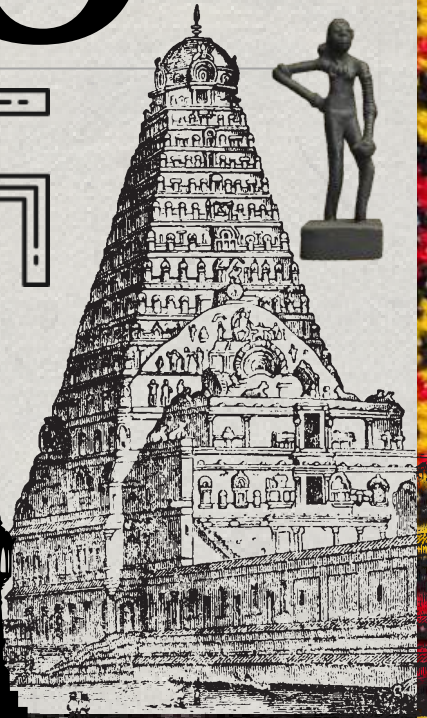
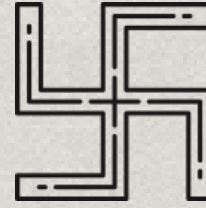


Vishwaguru

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संस्कृतम्



Disclosing the Ancient Knowledge Systems and Heritage of India