

Theme: Inspirational Architecture

Manifestation of Indian philosophy of temple architecture in Cambodia- A case of Angkor Wat, Siem Reap.

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Abstract:

Architectural history shows that there has been an inspiration for the architectural marvels in the civilizations like Greek, Roman, Egyptian monuments. Historically, the Greek architecture has followed the Aegeans and later on influenced Roman architecture, the Persian architecture has influenced Indian architecture creating a new category of architecture as Mughal architecture. More so, various styles were developed by taking inspiration from preceding ones from various parts of the world. However, 'Inspiration' in Architecture is not limited to the superficial characteristics but includes much larger arena of factors like the philosophy, theory, concept, spiritual understanding and also ways it is manifested in the architectural form.

India and South-East Asia has always been a topic of discussion for its resemblance in architectural forms. The paper focuses on how; historically; the architecture of South East Asia has been developed, by taking inspiration from Indian Architecture. This inspiration is much beyond the regular features of the structure and has an impact on the overall thought process of the builders and their creations. An exemplary Angkor Wat temple from Cambodia, which is the largest religious structure in the world and a world heritage site; shows a strong influence of Indian architecture, culture and social systems, which is considered as a marvel constructed from 1112 to 1152 AD, during the Reign of Suryavaraman-II. This paper is an attempt to examine the Indian architectural philosophy which must have inspired the Khmers from Cambodia to construct such unique and perfect piece of Architecture.

Keywords: Architectural History, Influences, Architectural styles, Inspiration, creations

1. Introduction:

Architectural Creations are grounded with references collected through the inspiration or influence of, past experiences, established theories, a thought and sometimes, a previous creation, which becomes a base for a new creation. The inspiration has always played a vital role in Architecture, which can help derive the idea, the concept of designing, construction, etc. There are instances where the inspiration was taken from the philosophies, theories, forms, natural elements, and so on.

It is important here to understand that though the inspiration can be of any form which leads to a creation, it is manifestation of the original as per the perception of the individual. So the representation in final outcome will have some or the other element, tangible or intangible, taken from the original object.

In current scenario, it is observed that the inspiration in architecture has become a very superficial adaptation, wherein it is related to styles. Here, through this paper, the attempt is to appraise the depth of the Indian architecture historically, which was so intense and strong, that it was followed with all the in-depth understanding in various parts of the world.

The point one is trying to make is that the inspiration we conceive as on today should be much beyond the features and goes on till the conceptualization of the architectural outcome.

South East Asia, for instance, shows a strong Indian Influence. Ayutthaya at Thailand, The Sanctuary of My Son at Vietnam, The temple of Borobudur at Indonesia, The sacred City of Anuradhapura at Sri Lanka, show a common inspiration behind the manifestation of the architectural form i.e. **Spirituality/ Religion or the supporting philosophies i.e. shastras.**



Figure 1: Ayutthaya, Thailand, Figure 2: Borobudur, Indonesia

The South East Asia and India were connected historically through the commerce & trade, and also through the religious beliefs which lead to establishing a particular Indianized¹ social system in this region. The objective of this paper is to trace the elements which are inspired by the Indian architecture and implemented in South East Asian architecture, by using the case of Angkor Wat. It is the Largest Religious structure in the world and also a world heritage site nominated by UNESCO in 1992, within the criteria i, iii and iv².



Figure 3: Angkor Wat, Siem Reap, Cambodia



Figure 4 Cambodia Today³

2. Inspirations in ancient temple architecture:

In ancient times, the temple was built as an image of god on earth, indeed it was believed to be the precinct or territory of god. Originally the temple was the dwelling place of god or goddess, which was represented therein by a statue, a mystic symbol or invisible oracle⁴. The inspiration here was the belief and its perception. The floors of the temples represented earth, the pools and the fountains represented seas and rivers, the arched ceiling

represented the heavens. Each part was decorated. E.g. the Egyptian temple.

In the later period, the concept of temple though remained same, the philosophy was perceived differently in various parts of the world. In India, the temple architecture as a construction activity started much later than rest of the world. The concept of constructing an abode for the god was existing since Vedic times, which was perceived as a special space in the house, instead of a community space. It would be appropriate to state that though the inspiration of constructing temples in houses was same in India and Pre-Vedic cultures around the world, the manifestation was more indigenous.

History of Indian Architecture:

Here is it important to take an overview of evolution of Indian architecture. India is vibrant and culturally diverse region. Rich in various arts and crafts, it always had a strong hold on the philosophy through the Shastras and its manifestation in Architecture through the planning principles established since time immortal. Various shastras were developed to guide the activities, the set rules of planning were established and history suggests that the construction activity started around 3500 BC which is termed as “Vedic period”. As the material used majorly was timber, the traces cannot be found from this period.

Then; during 3rd C BC the era of Buddhism, a new way of worshipping has started which had boosted with the patronage of King Ashoka. This makes the most enduring period of the architectural history of India as there was a complete shift from timber to stone which is commonly known as “Rock Cut Architecture”, though the language of architecture was still timber. This was the time, when people were thinking in Timber, but executed architecture in Stone.

India has witnessed various changes in the architectural forms, materials, and transformation in the philosophy of Architecture from 3rd Century BC till AD 600.

The period hereafter was the shift of focus from Buddhist architecture to Hindu temple architecture during the reign of Chalukyas. At their capital city of Aihole, a group of craftsmen were commissioned to build the shrines of Aryan gods, this was the first experiment to build the “free standing” structures in Stone in India. Here onwards, there was a complete boom in construction of Temple activity. The Lad khan temple and Durga temple, at Aihole shows this transition distinctly. There were also a few attempts in changing the material from Stone to Brick e.g. Bhitargaon temple. The temple plan started developing during this period, starting with Garbhagriha with entrance portico⁵.

This was a start point of evolution of two distinct styles- Nagara (towards north) and Dravidian (Towards south) have been developed in next 500 years. These styles had peculiar characteristics in terms of the temple planning, the overall plan form and Shikhara.

3. India outside India:

While the temple architecture was evolving in India, the rulers were also busy in establishing relations with the lands overseas, which can be established through our maritime history.

India was linked to Southeast Asia by geography, religion, politics, and history. Composed of many nations, tribes, and cultures, this area has been a home to some of Asia's most significant civilizations and empires⁶. Historically, the period from 1st AD till 13th AD is remarkable for the exchange of ideas, resources and cultures between India and other parts of the South East Asian region. But the fully flourished Indian dominant culture has reached its peak in 900-1300 AD.

Evidence of the region's historic accomplishments remains visible in the architecture, sites, and traditions

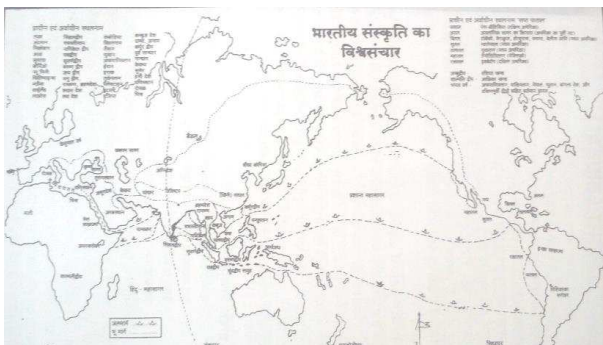


Figure 2: The sea routes and connections of Ancient India to other region

that are still respected and practiced. In terms of resources, some of these sites receive enormous global attention, e.g., Angkor, Pagan, Luang Prabang, Hoi An, Ayutthaya, and Borobudur.

4. Brief history of Cambodia (Kambuja):

As per the Chinese records, Kaundinya, a Brahmin from India, set forth northward in the country. Having reached almost 150 kilo meters from the sea shore, he threw his divine spear and the place where it landed, he decided to build his capital. This spear as per the legend is believed to be given to the forefathers of Kaundinya by Ashwathama, the son of Dronacharya. This place was named as Vyadhpur, the capital of Kaundinya's empire and Kaundinya's dynasty ruled for almost two hundred years.

This was called as Funan Empire in the contemporary Chinese records.

Of the many Indianized kingdoms of Indo China, Funan is probably the most ancient. The legend of the founding of the kingdom of Funan probably in the latter part of the 1st C AD, comes to us from Chinese sources⁷.

There is a long lineage of kings after this.

In the later part of sixth century A.D., a king named Kambu Swayambhuva (Sarvabhauma) took over the reins of power. Therefore, this country was called as 'Kambuj'. From 5th C AD to 10th C AD, the successive

kings have shifted their Capital cities, e.g. Mahendrarvarman (600-616 A.D.) built Bhavapura, his son Ishanvarman I (616 AD) included Chakrankapura, Amoghapura and Bheemapura which were on the North-West part of Kambuj and as per the need of the growing empire he shifted his capital and created a beautiful city called Ishanapura. 9th century, was a beginning of a golden era of Khmers. The kings, right from the first century called themselves as 'Shailaraj' or Shrishaila' but now this kingdom was called as "Khmer" from here onward.

Till 1110 AD, the successive kings shifted their capitals and also there is a lot of political confusion during this period.

In a political shift, Suryavarman-II crowned himself as the king of the empire after a brief war which lasted only for a day. This 15 year old king, had ambitious plans. He immediately started securing the existing boundaries and expansion of the kingdom to ward of the threats from other rulers. By the end of his rule he had an army of over 150000 and he reined over 285000 sq. km territory.

The second most ambitious thing he did was the commencement of the Vishnu temple of unprecedented dimensions. It is very remarkable to note that he planned this temple within couple of years of coming to power that is around 1116 A. D. when he was still in his teens. It is said that he appointed master architect Divakarpanidit, a Brahmin from India settled in Cambodia; for this work. Though it is not sure that he designed Angkor Wat himself, but it is clear that he was a driving force behind the conceptualization of this huge temple. Apart from Angkor Wat, either the king or high-ranking officials or priests also began the work on the temple of Banteay Samré, located at the east-southeast corner of the East Baray, and also the smaller temples of Thommanon and Chau Say Tevoda. The temple of Beng Mealea, about 50 km east of Angkor, was also begun during the first half of the twelfth century⁸.



Figure 5: Historic capitals of Khmers, strategic locations⁹

After Suryavaraman-II, Yashovarman II became the king and ruled till 1165 A. D. during this period there were increasing revolts. There were both alliances and conflicts between some Khmer and Cham princes, rendering the political situation very confused. This might have been the end of Khmer rule at Angkor, had it not been for the return of the prince, later crowned as Jayavarman VII. After four years of fierce fighting, he succeeded in driving out Chams, beginning his reign in 1181 A. D. He was the last great king of Angkor. He was a fervent Buddhist, so he built temples dedicated to Buddha, prominent among which are Ta Prohm, Banteay Kdei and Preah Khan. Apart from these he built hundreds of other temples, hospitals and other buildings across the empire.

5. Indian Architecture as an inspiration for Cambodia:

The cultural and commercial interaction between South India and Cambodia, in fact, dates back to a few centuries before Christ. South Indian merchants and artists regularly came to Cambodia through diverse land and sea routes. Located on the great maritime highway between India and China, Cambodia, from early times, emerged as a major commercial hub in the long distance trade network that linked China, South East Asia, Sri Lanka, India, Africa and Rome. Spices and gemstones from South East Asia reached the ports on the east coast of India (Andhra Pradesh-Tamil Nadu), from where they were shipped to the Red Sea ports of Africa and from there sent to Rome through the North African port of Alexandria¹⁰.

South Indian influence on Cambodian art and culture was prolific during the rule of Pallava (3rd - 9th AD) and Cholas (9-13th AD) in South India. Among the Pallava kings, it is very well known that the title Varman was honorific and so was borrowed by the Cambodian kings. Almost all of them having the suffix 'Varman' starting with Bhadravarman in 4th AD. He happened to be a scholar and well versed in Vedas and author of several inscription in Sanskrit.

The Grantha called Pallava Grantha script traveled to Cambodia from Pallava. Some of the birudas (titles) of Pallava kings including Mahendravarman-I appear to be in the Khmer language. Nandivarman Pallavamalla, one of the later Pallava rulers, is believed to have lived in Cambodia before he travelled to Kanchi and then ascended Pallava throne.

Architecturally, the temple of Angkor Wat which is based on the "Panchratna" concept of planning. This planning principle was evolved during the 500AD and mostly used by Buddhist monks to construct the monasteries and stupas. The plan form of Angkor Wat shows this feature which is enhanced with the galleries all around the Panchratna plan. As per Eleanor Mannikka¹¹, these galleries are dedicated to the king, Brahma, the moon, and Vishnu.

The planning and conceptualization of the temple further described by Eleanor Mannikka in her research on the measurements of Angkor Wat temple.

5a. Philosophical inspirations:

The major inspiration of this temple is based on the **Solar, Lunar alignments and the concept of cosmology**. Our universe is transformed into four distinct and successive time periods i.e. Yugas, repeated over and over again, in a sequence of Satya, Treata, Dvapara, and Kali. Of these four cycles the Kali Yuga, our own time period, is the worst of all. During which the human life span is shortest and wars and famine are common, morality and ethics are all but lost. Till ill-fates time cycle lasts for 432,000years and according to the legend began a few thousand years ago, after the end of Mahabharata War.

Yuga	Celestial Years	Terrestrial Years
Satya	4800	1,728,000
Treta	3600	1,296,000
Dvapara	2400	864,000
Kali	1200	432,000

Here in Angkor Wat temple, the space becomes the symbol of time, and we would consecutively leave our era behind on the bridge before entering the temple. As our era is most inauspicious, the architect of the temple has kept this approximate 432 units measurement at the farthest possible distance from the central sanctuary. In fact, it lies beyond the protective enclosing wall of the temple.

The whole temple starting from the entrance passage way on the west side till the central topmost tower has a specific alignment fitted into specific dimensions related to Hindu calendar and philosophies. The content of measurement system and thematic sets is not only coherent and logical, it reinforces everything we know about the Indian temple architecture.

In the end, the measurements' corroboration of Hindu concepts demands a great deal of respect- both for the coding of these concepts and for the priests who developed this system of temple construction. The architect of Angkor Wat were brilliant and well educated whose knowledge ranged from Architecture to Sanskrit to Astronomy to religious rituals¹².

Time does not stop at the end of these four yugas.

Cycle continues till a final and total dissolution. At some point when Vishnu was awake, the architects inserted the beginning of the three remaining yuga periods into the beginning, middle and end of the bridge (Fig :6).

Satya (Krta Yuga): from the 1st step up to the bridge to the last step out of the threshold of the second gallery, facing upper elevation of the temple

Treta Yuga: from the center of the bridge to the doorway onto the third gallery

Dvapara Yuga: from the end of the bridge on the east, at the point where the first step up to the western entrance begins, to the point at which the Naga

balustrade around the central galleries of Angkor Wat intersects the causeway.

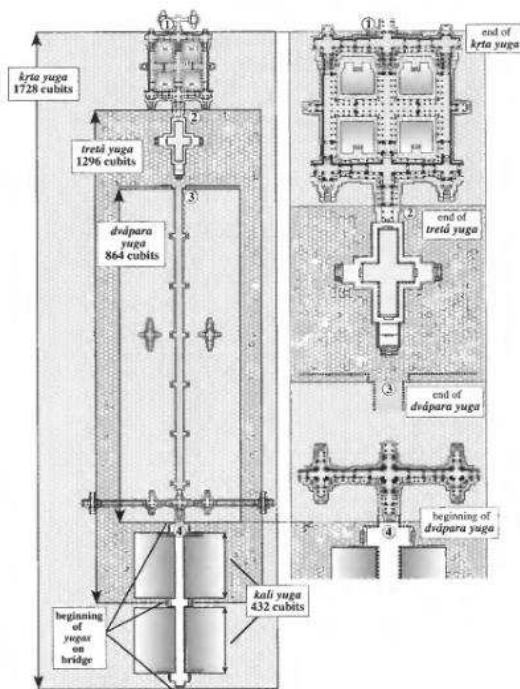


Figure 6: Diagram of 4 Yuga Cycle on western Axis¹³

As we leave negative Yuga behind on the journey to Angkor Wat, time becomes purer as a consequence¹⁴.

5b. Inspirations through the mythology

Various bas reliefs inside the galleries at significance locations, depicts the wars of Ramayana and Mahabharata, posturize the concept of Swarga and Naraka based on the deeds (Karmas), and also the story of Samudra Manthana (churning of sea by gods and demons).

The existence of a water body in the surroundings is a common feature in all Dravidian temples. The water body is been modified and used an element surround the temple complex, which represents the sea and the temple represents the Mount Meru in Angkor Wat temple.



Figure 7: Bas Relief demonstrating the punishments in Naraka

Conclusion:

Historically, there are various explanations to support the fact that approximately 5000 years ago, there were various ports – Lothal, Chol, Dabhol, Rajapur, Malwan, Goa, Chennanur, Kottayam, Kanyakumari, Konark, Masulipattan, Nagapattan, Kaveripattan, which has its references in 2000 year old manuscript named- ‘The Erithrias Sea’, which also mentions the ports of Shurparak (Sopara) and Brugukuttach (Kuttch). The travel across various countries and the transfer of culture from India to various regions is apparent. It is evident from the similarities in the architectural vocabulary, the perception of Indian mythology and cosmology, Vastushastra and its manifestation in architectural form that the people from South East Asia were highly inspired by the Indian Culture and hence could dare to construct such a magnificent structure of Angkor Wat with so much of confidence. It, indeed, has remarkable indigenous characters. The science behind constructing these temples in India was understood, and followed with in-depth understanding in Cambodia and in other parts of Asia. It clearly shows that Indian culture was major contributor towards the architectural development.

¹ Prof Georges Coedès, (1886- 1969), scholar of South-East Asian Archaeology and History, coined this term.

² <http://whc.unesco.org/en/criteria>

³ John Tully, The brief history of Cambodia, from empire to survival, Allen & Unwin, 2005

⁴ AT Mann, “Sacred Architecture”, Vega, 2002

⁵ Satish Grover, Buddhist and Hindu Architecture in India, CBS publishers & distributors pvt ltd, 2003

⁶ Dr. Sharad Hebalkar, Krunvanto Vishvmaryam, New Delhi (Akhil Bharatiya Itihas Sanshodhan Yojana), 2010

⁷ Lawrence Palmer Briggs, The Ancient Khmer Empire, White lotus press, 1999.

⁸ Eleanor Mannikka, Angkor Wat: Time, Space and Kingship, University of Hawai'i Press, 2000

⁹ Dr. Sharad Hebalkar, Krunvanto Vishvmaryam, New Delhi (Akhil Bharatiya Itihas Sanshodhan Yojana), 2010

¹⁰ Prema Kasturi and S. Suresh, Influence of Angkor on India, Article in The Hindu, 2009

¹¹ Eleanor Mannikka, Angkor Wat: Time, Space and Kingship, University of Hawai'i Press, 2000

¹² ibid

¹³ Ibid, page no 50