INDIAN ARCHITECTURE
- The Ancient Period -

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Beauty, symmetry, magnificence are words which can best describe Ancient Indian Architecture.

Dear Friends... today I am going to talk about this topic. In this lecture first I am going to touch upon the evolution and various schools of Ancient Indian Architecture.

Thereafter I will discuss the various ancient architectural expressions under different rulers of Ancient India and also their chief features.

We will round up this session by discussing the international influence of Ancient Indian architecture.
Indian Architecture

Indian architecture encompasses a multitude of expressions over space and time, constantly absorbing new ideas. The result is an evolving range of architectural production that nonetheless retains a certain amount of continuity and its own individuality, across history.
Evolution of Indian Architecture

1. The Indus Valley Civilization (2600-1900 BC).
2. Maurya & Gupta empires - Buddhist architecture in Ajanta-Ellora caves, Sanchi Stupa etc.
4. Islamic influence - Fatehpur Sikri, Taj Mahal, Gol Gumbaz, Qutub Minar etc.
5. British Indo-Saracenic style and European Gothic. e.g. The Victoria Memorial & the Victoria Terminus.
6. Recent creations, Lotus Temple and Birla Temples across country.
THE SCHOOLS OF ART

Gandhara School of Art
Mathura School of Art
Amravati School of Art
The Gandhara School of Art (50 B.C. to 500 A.D.)

• Gandhara region (Punjab to Afghanistan) was an important centre of Mahayana Buddhism up to the 5th century A.D.

• Imbibed foreign influences - Persian, Greek, Roman, Saka and Kushan. Kanishka gave the art, greatest patronage.

• The school evolved beautiful images of Buddha in standing or seated positions, Bodhisattavas in black stone, modeled on identical characters of Greco-Roman pantheon.
The Gandhara School of Art (50 BC - 500 AD) (contd..)

- Gandhara Art has rich carving, elaborate ornamentation and complex symbolism.

- The best specimens are - Jaulian and Dharmarajika *stupa* at Taxila and from Hadda near Jalalabad in modern Afghanistan.

- The tallest rock-cut statue of Buddha is located at Bamiyan in modern Afghanistan. (3-4 A.D.)
The Mathura School of Art (1-3 A.D.)

1. Flourished in the holy city of Mathura.
2. It established the tradition of transforming Buddhist symbols into human form. Buddha’s first image can be traced to Kanishka’s reign (about 78 A.D.).
3. The earliest sculptures of Buddha were made keeping the yaksha prototype in mind.
4. Also produced beautiful images of the Jain Tirthankaras and gods and goddesses of the Hindu pantheon.
5. The Guptas adopted the Mathura School of Art and further improvised and perfected it.
Yaksha Prototype Buddha - Dhauli
The Amravati School of Art (200 BC - 200 AD)

1. This school of art developed at Amravati, on the banks of the Krishna River in modern Andhra Pradesh.
2. It is the site for the largest Buddhist *stupa* of South India.
3. Its ruins are preserved in the London Museum.
INDUS VALLEY CIVILIZATION

• The Indus civilization or the Harappan civilization - flourished during the Bronze Age i.e. 2500-2000 BC.

• More than 100 sites belonging to this civilization have been identified.

  – Prominent are Dholavira (Gujarat), Kalibangan (Rajasthan), Lothal (Gujarat) etc.
1. Extensive town planning - evident from the gridiron pattern for the layout of cities, some with fortifications.

2. Elaborate drainage and water management systems - rare in contemporary civilizations at Mesopotamia and Egypt.

3. The houses were built of baked bricks, of fixed sizes, as well as stone and wood. Many houses were two storied.
4. The most imposing of the buildings were:

a) The Great Bath of Mohenjodaro. It had galleries and rooms on all sides

b) Granary complex comprising of blocks with an overall area 55 x 43 metres. The granaries were intelligently constructed with strategic air ducts and platforms divided into units.
A HARAPPAN STREET AND ADJOINING HOUSES - LEFT SIDE HAS BEEN EXCAVATED.
The Great Bath
A Drain
A WELL IN A SARAI AT HARAPPA
A Harappan Laterine
A Cemetery
THE MAURYAN PERIOD
Chandra Gupta Maurya

Mauryan Architecture

- Finest specimen of Indian art
- It was embalmed in timber
- Rocks and stones were not used
- Chandra Gupta Maurya built many buildings, palaces and monuments with wood, most of which have perished with time.
ASHOKA

• The first Mauryan Emperor who began to "think in stone"

• Stonework of Ashokan Period (3rd BC) was highly diversified and comprised of lofty free-standing pillars, railings of the stupas, lion thrones and other colossal figures.

• Some exotic forms show influence of Greek, Persian and Egyptian cultures.
ASHOKA (contd..)

• This was the beginning of Buddhist School of architecture in India. It witnessed the construction of many rock-cut caves, pillars, stupas and palaces.

• Cave-shrines – Barabar, Nagarjuni hills & Sitamarhi in Bihar.

• The Ashokan rock-edict at Dhauli near Bhubaneshwar is the earliest rock-cut sculpture in India. It has a sculpted elephant on top signifying the Emperor's conversion to Buddhism after his Kalinga victory.
The monolithic Ashokan pillars are marvels of architecture and sculpture. The Sarnath pillar is one of the finest pieces of sculpture of this period. The Ashokan pillars also throw light on the contacts India had with Persia and other countries.

Ashoka constructed several stupas, which were large halls, capped with domes and bore symbols of Buddha. Important ones are at Bharhut, Bodhgaya, Sanchi, Amravati and Nagarjunakonda.
ASHOKA (contd.)

- Buddhist shrines or the monasteries were built in irregular designs following the Gandhara style of architecture. Built on the patterns of a fort and defended by a stone wall, the monastery evolved from the site of an ancient *stupa*. The principle buildings were housed within a rectangular courtyard with a *stupa* in the south and the monastery in the north.

- Ashoka had built many palaces but most of them have perished. His palace near Patna was a masterpiece.
The ASHOKAN Pillar
The ASHOKA Pillar
The Sarnath Stupa
Shanti Stupa - Dhauli
THE SUNGAS, KUSHANS & SATAVAHANAS

• After Mauryans, the Sungas and Kushans came in the north and the Satavahanas in the south.
• They contributed in stone construction, stone carving, symbolism and beginning of temple (or chaitya hall) and the monastery (or vihara).
• They enlarged Asokan stupas and replaced earlier brick and wood works with stone-works. Sanchi Stupa was enlarged to twice its size in 150 B.C.
• The Sungas also built the toranas or the gateways to the stupas. These toranas indicate the influence of Hellenistic and other foreign schools in the Sunga architecture.
The Torana of Sanchi Stupa
• The Satavahanas constructed *stupas* at Goli, Jaggiahpeta, Bhattiprolu, Gantasala, Nagarjunakonda and Amravati.

• During the Kushan period (1-3 AD), Buddha was represented in human form instead of symbols.

• Another feature of this period was that the Emperor himself was shown as a divine person. The Kushans were pioneers of Gandhara School of Art and a large number of monasteries; stupas and statues were constructed during the reign of Kanishka.
Indian temple architecture is distinguished by two chief styles, each having numerous sub-styles:

a) Northern or Indo-Aryan style is marked by a tower with rounded top and curvilinear outline.

b) Southern or Dravidian style has the tower usually in the shape of a rectangular truncated pyramid.

The construction of temples – whether in the north or the south – essentially followed a similar pattern.
Layout Plan of a Typical Temple

- Garbhagriha
- Mandapa
- Circumambulatory
- Steps
External View
a) The sanctuary or the *vimana* with the upper and outer pyramidal and tapering portion i.e. *shikhara* or pinnacle. *Vimana* is a dark place housing the divine deity and is called *garbha griha*

b) The entrance is through a doorway, normally from the eastern side. The doorway is reached through a *mandapa* or pillared hall. Earlier temples may have had the *mandapa* at a little distance from the main temple (Shore Temple in Mamallapuram near Chennai 700 AD)

c) Later, both buildings were united, making way for *antarala* or intermediate vestibule

d) A porch, *ardha mandapa* led to a hall (*mandapa*) and further into a *maha mandapa*
Periya Temple – Mandap Away from Main Temple
Mandapa or Prayer hall

Ardha Mandapa

Garbh-Griha

Layout Plan of a Later Temple
e) A tower generally surmounted the shrine-room while smaller towers rose from other parts of the building.

f) The whole conception was set in a rectangular courtyard, which sometimes contained lesser shrines and was often placed on a raised platform. The perfect examples of temples on this structure are the Khajuraho temples.

g) In some parts of India, the ascending pyramid roof format was not followed. The roof in such temples was still pyramidal, but was formed of layers that gradually narrowed as they rose.

h) The *shikhara* or tapering roof was specifically based on this design, which may have evolved from domed huts of central and eastern India.
The Gupta Style Of Architecture

1. Gupta Period (4th-7th AD) - "Golden Age of art and architecture in India". Sarnath emerged as a school par excellence in Buddhist art. Best sculptures from Sarnath depicts Buddha giving his first sermon in the Deer Park.

2. This period witnessed a tremendous resurgence of Images of Vishnu, Shiva, Krishna, Surya and Durga. Udaigiri caves in Madhya Pradesh house a colossal image of Lord Vishnu.

3. Basic elements of the Indian temple consisting of a square sanctum and pillared porch emerged. Temple sculptures were not necessarily religious. Many drew on secular subject matters and decorative motifs.
4. The Parvati temple at Nachana, the temple of Bhitaragaon, the Vishnu temple at Tigawa, the Shiva temple at Bhumara and the Dasavatara temple at Deogarh are among the best examples of the Gupta style of temple architecture.

5. The cave architecture also attained a great degree of refinement during the Gupta period. The Chaitya and Vihara caves at Ajanta and the Ellora caves are the best specimens of cave-architecture of the period. The rock-cut caves at Khandagiri, Udayagiri and Undavalli also belong to this period.
Dasavatara Temple
Deogarh
- Gupta Architecture
Ajanta & Ellora Caves
Ellora Cave Temple
Varaha - Udaigiri Caves
1. The Pala School of Architecture (8-13 Century AD) flourished in Bengal and Bihar under the Pala and the Sena rulers.

2. Nalanda was its most active centre, whose influence was spread to Nepal, Myanmar and even Indonesia.

3. Stone sculptures of this period are found at Nalanda, Rajagriha, Bodh Gaya, Rajashahi and other places.
Giant Buddha Bodhgaya
THE CHANDELAS (10-11 A.D.)

1. The Chandelas of Jijihoti or Bundelkhand built temples at Khajuraho famous for their graceful contours and erotic sculptures. Only 22 temples (out of the original 85) remain.

2. The Khajuraho Temples were built within a short period of hundred years. Each temple is divided into three main compartments - the *cella* or *garbha griha*, an assembly hall or *mandapa* and an entrance portico or *ardha mandapa*. Some temples also contain the *antarala* or vestibule.

3. Kendriya Mahadev temple is the largest and most beautiful of the Khajuraho Temples. Shiva Temple, Visvanath & Vishnu Temple, Chaturbhanj are important temples at Khajuraho.
Khajuraho Temple Sculpture
1. The Solanki style flourished in Gujarat.

2. It consists of a sanctum, a closed hall and a porch that are inter-connected internally and externally. The wall faces are broken by numerous indentations, projected and recessed alternately, which are continued along the elevation, producing a pleasing contrast of light and shade. In larger temples a detached peristylar hall is added in the same axis, often preceded by a torana. In rare cases the hall has more storeys than one.

3. The temple at Sunak (10th century), Sun temple at Modhera (11th century), the Vemala Temple at Mount Abu (11th century) and the Somnath Temple at Kathiawar (12th century) are some of the best examples of this style of architecture.
Somnath Temple - Kathiawar
1. The Chalukyas (c.450 AD to c.650 AD) constructed several stone-built shrines and temples at Aihole, which are mostly Hindu but a few are Jain.

2. Aihole was the town of temples consisting of nearly seventy buildings.

3. The Chalukyan Architecture is a juxtaposition of Indo-Aryan and Dravidian styles in the temple architecture, and is sometimes referred as the Vesara style of architecture.
Aihole - Narasimha
THE CHALUKYAN ARCHITECTURE

(contd..)

4. It is evident that during the Chalukyan period the rock-cut method was slowly superseded by the use of stone masonry.

5. The Chalukyas also constructed four rock-cut pillared halls at Badami in the later half of the 6th century AD, three of which are Brahmanical and one is Jain. The final phase of the Chalukyan Art is represented by the temples of Pattadakal (7th century AD).
Rock Cut Pillared Hall - Badami
Mallikarjuna & Kasiviswanath - Pattadakal
THE ORISSAN ARCHITECTURE

1. The temples at Orissa (ancient Kalinga) - the finest examples of the Indo-Aryan style of temple architecture.

2. The generic name of the Orissa temples is *deul*, which has in its front a square building or assembly hall called *jagamohan*, which corresponds to the *mandapa*.

3. Later other structures like the *Nat-Mandir* or Dancing Hall and *Bhog Mandir* or Hall of Offerings were added to the temple structure.

4. The lower and the upright portion of the *deul* is called the *bada*, the tall middle portion is called *chhapra*, the flat fluted disc at the summit is called *amla* and its finial is called *kalasa*.

5. The Orissan temples as a whole are of the *astylar* order, pillars being notable by their absence.
6. The Orissan temples are divided into three groups:

(a) Early Period (750-900 A.D.) e.g. Parashurameshwar and Lakshmanesvara temples at Bhubaneshwar.

(b) Middle Period (c.900-1100 A.D.) e.g. Mukteshwara and Lingaraja temple at Bhubaneshwar and Jagannath temple at Puri.

(c) Later Period (c.1100-1250 A.D.) e.g. Raja Rani Temple at Bhubaneshwar and the Sun Temple at Konark.
Parasurameswara Temple
Bhubaneshwar
Jagannath Temple - Puri
Raja Rani Temple - Bhubaneshwar
Jagannath Temple
Puri
Sun Temple - Konark
Jain Architecture

* Every phase of Indian art is represented by a Jain version.

* Jain architecture has no style of its own – it is an offshoot of Hindu and Buddhist styles.

* Initially Jain temples were carved out of rock faces and use of bricks was negligible. Later Jains started building temple cities on hills on the concept of ‘Mountains of immortality’.
Jain Architecture (contd..)

- Temples were surrounded by embattled walls, were divided into wards, guarded by massive bastions at its ends with fortified gateways at the main entrance.
- No specific plan was followed – they were results of sporadic constructions.
- Only variations in these temples was in the form of frequent Chaumukhs or four faced temples and in these the image of tirthankara faces the four sides. E.g. Chaumukh temple of Adinath (1618 AD).
Jain Architecture (contd..)

- The most spectacular jain temple are found at Ranakpur and Mount Abu in Rajasthan.
- Karnataka, Maharashtra and U.P. also have important Jain temples.
Jain Temple - Ranakpur
Palitana Temple
Jain Temple
Rajput Architecture

- Finest examples of Rajput Architecture are their Forts and Palaces.
- Palaces were inner citadels surrounded by cities, enclosed by a fortified wall – Cittorgarh and Jaisalmer palaces.
- Some forts were protected by wide moats. (Bharatpur and Deeg)
- Man-mandir – largest palace in Gwalior – built by Raja Man Singh Tomar (1486-1516). This palace overhangs a stone cliff which is punctuated by five massive round towers, crowned by domed cuppolas, linked by delicately carved parapets. Whole facade enriched by brilliant blue tiles.
Chittorgarh Fort & Victory Tower
Jaisalmer Fort
Man Mandir Palace - Gwalior
Rajput Architecture

Palaces of Jaisalmer, Bikaner, Jodhpur, Udaipur and Kota, built predominantly in the 17th and 18th centuries, represent the maturity of the Rajput style. Fortified city of Jaisalmer in Thar desert is constructed by local yellow-brown stone and is known as the Golden City.

City of Bikaner is enriched by a 5.63 km. Long stone wall in rich pink sandstone.

In Jodhpur, the Jodhpur Fort dominates the city which is surrounded by a 9.5 km. Long wall with 101 bastions.
Jodhpur Fort > Inside view

< Jodhpur Fort Outside view
Rajput Architecture

- The Pink city of Jaipur, built by Raja Jai Singh in 1727 AD, represents the final phase of the Rajput Architecture.
- There is fusion of eastern and western ideas in town planning.
- The palace is at the centre of the city and is the synthesis of Rajput and Mughal architectural styles.
- Other famous buildings are Hawa Mahal and Jantar Mantar which were built by Jai Singh II which is an astronomical delight.
South Indian Architecture

1. The South Indian style of temple architecture is very distinct from that of the rest of India.

2. Four types of architecture correspond to the four kingdoms of southern India - the Pallavas, Cholas, Pandyas and the Vijayanagara rulers.

3. According to the plan – four sided, polygonal or curvilinear – the southern Vimanas are classified in the southern Silpa and Agama texts as Nagara, Dravida and Vesara.
Angkor Wat Temple - South India
1. Temple architecture of Pallavas is divided in two groups: rock-cut (610-690 AD) & structural (690-900 AD)

2. The greatest Pallava architecture are the rock-cut temples at Mahabalipuram.

3. Kailasanatha and Vanikunthaperumal temples at Kanchipuram are the best specimens of the structural temples of the Pallavas.

4. Transition of wood to stone was effected in northern India during the reign of Ashoka in the 3rd Century BC. However, it took one thousand years in southern India, under the Pallavas.
The PALLAV Architecture

The Shore Temple, Mahabalipuram
Rock Cut Sculptures - Mahabalipuram
The Chola art is a continuation of that of Pallava times.

Earlier Chola temples were modest in size. Later ones had *Vimanas* or *gopuras* dominating the landscape.

Chola architecture achieved its peak at Thanjavur, the capital established by the Chola ruler Rajaraja-I. The Brihadeshwara temple at Thanjavur, erected around 1000 AD, has been described as “the most beautiful specimen of Tamil architecture”.
4. Temples at Thanjavur, Chidambaram, Sri Rangam, Gangaikonda - Cholapuram, Darasuram and Tribhuvanam amply illustrate the style of architecture in southern India between the 11th-13th centuries.

5. Chola style had a great influence on the architecture of Hindu temples of Ceylon (Sri Lanka) and Southeast Asian kingdoms like Sri Vijaya (Sumatra) and Chavakam (Java).
The Chola Architecture

Thanjavur

Thiru
The Chola Sculpture
The Pandya Territory (1100-1350 AD)
1. Pandyas built many *gopurams* or monumental entrances to the existing temples.

2. The Sundara Pandya *gopuram*, added to the temple of Jambukesvara around 1250 AD, and *gopuram* of Kumbakoman (1350 AD) temple are best examples.

3. Pandyas are also credited with the construction of Airyavatesvara temple at Darsuram in Tanjore district during the first half of the 14th century AD.
THE HOYSALAS (1100-1350)

1. Hoysala temples have complicated plans, may be polygonal/star-shaped, angled projections.

2. The carved surfaces are executed with remarkable precision, usually in chlorite.

3. Columns are multi-faceted. Each temple is supported by a low-pyramidal tower, which is often surmounted by a vase-shaped ornament. On many occasions such pyramidal towers are used, giving a look of a double or triple temple.

4. Hoysala period temples are at Belur, Halebid and Sringeri in Karnataka. Channakeshava temple at Belur. Hoysaleshvara at Halebid are famous.
The Hoysala Architecture
The Belur - Halebid
1. Vijayanagar style inherited aspects from three main regional styles of the art of South India, viz. Dravidian style of Cholas and Pandyas, style of Chalukya-Hoysala tradition and the Indo-Islamic art of the Bijapur region.

2. Vijayanagar temple architecture has special features:
   a) The development of the temple complex: concentric series of rectangular enclosure walls with gopuras (towered gateways) in the middle of each side.
   b) Construction of many mandapas, Kalyana mandapa being most conspicuous among them.
   c) Temples also had Devi Shrine to keep the replicas of consort of the deity.
   d) Absence of mortar in their construction.
The Vijayanagar Empire (1336-1565 AD)
The Vijayanagar Architecture (1336-1565) (contd..)

3. Vijayanagar tradition shows a distinct scheme of decoration in terms of architectural space. Decorative friezes - horizontally on the plinth moulding, caves and pillars of the temple, interiors and vertically on the composite pillars, plasters of the walls and doorways of the *gopuras* as well as the inner part. Pillars in the *mandapas* have figural motifs in low relief.

4. Vijayanagar city had so many temples that it was called *Kovilapura*. Of the numerous Vijayanagar complexes the most magnificent are those at Kanchipuram, Thiruvannamalai and Vellore.

5. This period also witnessed the construction of several secular structures like the Lotus Mahal and Elephant stables, which show strong Islamic influence.
THE NAYAKA PERIOD

1. The Dravidian style of architecture assumed its final form under the Nayakas (16th century AD) and lasted almost until the modern times.

2. Tirumalai Nayak (1623-1659 AD) was the greatest of the Nayaka rulers.

3. The style developed by these rulers is described as the ‘Madura style’ and is most evident in the Meenakshi Temple at Madurai (17th century). It is a double temple having two separate sanctuaries, one dedicated to Sundareshwara (Shiva) and the other to Meenakshi (Parvati). It has the tallest Gopuram (temple tower) in the world.
Meenakshi Temple (tallest Gopuram in the world)
Influence of Indian Architecture

1. The traditional system of Vaastu Shastra serves as India's version of Feng Shui, influencing town planning, architecture and ergonomics.

2. Though Vastu is conceptually similar to Feng Shui in that it also tries to harmonize the flow of energy (also called life-force or *Prana* in Sanskrit and *Chi / Ki* in Chinese/Japanese) through the house, it differs in the details such as the exact directions in which various objects, rooms, materials, etc. are to be placed.
3. Indian Architecture has influenced Eastern and South-Eastern Asia, due to the spread of Buddhism. A number of Indian Architectural features such as the temple mound or, temple spire or *sikhara*, temple tower or and temple gate or, have become famous symbols of Asian culture, used extensively in East Asia and South-East Asia. The central spire is also sometimes called a. The southern temple gate, or is noted for its intricacy and majesty.
Thank You