



What Got Us Here, Won't Get Us There

15th International Conference of the European Academy of Design

ONLINE and in PERSON in Brazil, Finland, India, Spain and the UK.

16-20 October 2023

ANALYZING THE ARCHITECTURE TIMELINE OF INDIA ON SOCIAL, CULTURAL AND ECOLOGICAL PARAMETERS TO COMMENT ON FUTURE TRENDS

"As an architect ; you design for the present with an awareness of the past; for a future that is essentially unknown"

-Norman Foster

Arzoo Kadian, Akshay Bhandral
World university of design, Sonapat, Haryana

Abstract: Indian architecture is deeply rooted in its social, ecological, and cultural identities. In fact Indian architecture timeline boasts the cultural and social beliefs of the Dynasty ruling the specific phase; examples of which can be clearly seen in the Buddhist Stupas, Hindu temples and Indo Islamic mosques. Indian architecture is more than 4000 years old; with each change in the society there was an evident change in the architecture and planning of the space. Indian architecture can be layered into innumerable fabrics that have been covered one over the other for thousands of years. The identification of architecture with the culture is evident and appreciated by all historians; but the question is what lies ahead for Indian architecture? A country that is vast and holds a varied population of 1.353 billion; can we depend on social and cultural factors only for architecture design or do we need to integrate other factors like climate change, sustainability and technology as a catalyst in the design process to make architecture of India efficient and valued.

This research paper deals with the historic timeline of Indian architecture; focusing on the impact of social, cultural and ecological influences on architecture; along with predicting the future trends and styles based on the current situation.

Keywords: Social, cultural, ecological, architecture, history, future

1. Introduction

Indian architecture can be traced back to 4000 years; with the Indus valley civilization thriving in the western plains of the country. India comprises a heterogeneous architectural style varying from cave temples to forts and palaces. Each style of architecture is highly influenced by ecological, social and cultural aspects; which is evident in the archeological remains of the structures. This statement can be verified by looking at the elephant carvings in the Kailashnath temple which was constructed by the elephant worshiping Rashtrakuta dynasty or the Stambhas portraying the teaching of Buddhism constructed by king Ashoka who adopted Buddhism. India has a vast Architectural heritage developed over the period of centuries and has witnessed many unique styles of architecture. There are many factors which contribute towards the evolution of these architectural styles. Most significant factors among them are:

- Social structure (how society is living, their active routine, beliefs and social responsibilities towards others into practice)
- Culture (religion, faiths and beliefs)
- Ecology (a significant variation ranging from majestic and gigantic Himalayas to Dravidian plains, western ghats eastern coast).

This research paper develops a historical timeline of significant architectural periods in India and maps the impact of social, cultural and ecological parameters. An understanding of the current society, culture and ecology is also discussed and the same is used to comment on future trends.

2. TIMELINE OF INDIAN ARCHITECTURE

2800 BC TO 1900 BC	INDUS VALLEY CIVILIZATION
300BC TO 1700 CE	JAIN ARCHITECTURE
4 TH BCE TO 5 TH CE	BUDDHIST ARCHITECTURE
320 BC TO 185 BCE	MAURYAN ARCHITECTURE
320 CE TO 550 BCE	GUPTA ARCHITECTURE
9 CE TO 13 CE	CHOLA ARCHITECTURE
1206 TO 1290	FIRST SULTANS OF DELHI
1600 TO 1900	MUGHAL ARCHITECTURE
1858 TO 1947	BRITISH ARCHITECTURE

Figure 1: Timeline of Indian architecture discussed in the research paper(source: authors)

2.1 INDUS VALLEY CIVILIZATION

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
----------------------	------------------------	--------------------------

**ANALYZING THE ARCHITECTURE TIMELINE OF INDIA ON SOCIAL, CULTURAL AND ECOLOGICAL PARAMETERS TO
COMMENT ON FUTURE TRENDS**

Indus valley emerged as an efficient, centralized, agrarian economy with a highly ordered urban culture which reached its peak in the first quarter of 2nd millennium BC. The Indus Valley Civilization was one of the world's earliest urban civilizations, which flourished in the region of the Indian subcontinent from approximately 2600 BCE to 1900 BCE. The society in the Indus Valley Civilization was highly organized, and evidence suggests that it was a highly developed and sophisticated civilization. The society was primarily agrarian, and agriculture was the primary occupation. The Indus Valley people were skilled farmers, who cultivated crops like wheat, barley, and cotton. They also practiced animal husbandry, and domesticated animals like cows, buffaloes, goats, and sheep. The Indus Valley Civilization was also known for its trade and commerce, with evidence suggesting that they had trade connections with other civilizations in Mesopotamia and Egypt. They had a well-developed system of weights and measures, and also used seals and scripts to facilitate trade and commerce. The society in the Indus Valley Civilization was also highly religious, with evidence of the worship of various deities, including a mother goddess, a bull deity, and a fertility deity. They also practiced burial and cremation rituals, as evidenced by the remains of burial sites and the presence of ash mounds. Social organization in the Indus Valley Civilization was also highly developed, with evidence of a well-organized administrative system, a class system, and a well-developed trade network. The civilization's system of weights and	Religion played an essential role in the Indus Valley Civilization's culture, with evidence of the worship of several deities, including a mother goddess, a bull deity, and a fertility deity. The civilization also had a strong tradition of burial and cremation rituals, as evidenced by the remains of burial sites and the presence of ash mounds. There is no evidence of a standing army, no palaces, and no temples. The Great Bath at Mohenjo-daro is believed to have been used for ritual purification rites related to religious belief but this is conjecture; it could as easily have been a public pool for recreation. Each city seems to have had its own governor but, it is speculated, there must have been some form of centralized government in order to achieve the uniformity of the cities. Fertility rituals may have been observed for a full harvest as well as pregnancies of women as evidenced by a number of figurines, amulets, and statuettes in female form. It is thought that the people may have worshiped a Mother Goddess deity and, possibly, a male consort depicted as a horned figure in the company of wild animals. The religious beliefs of the culture, however, are unknown and any suggestions must be speculative.	The Indus Valley Civilization was an agrarian society that relied heavily on its natural environment for sustenance. As such, the ecology of the region played a significant role in the civilization's development. The Indus Valley Civilization was situated in a fertile plain that was watered by the Indus River and its tributaries. The civilization's agriculture relied heavily on the availability of water for irrigation, and evidence suggests that the civilization had advanced systems of water management, including dams, reservoirs, and canals. The civilization also cultivated a variety of crops, including wheat, barley, cotton, and various fruits and vegetables. The region's natural environment also provided the civilization with resources for trade and commerce. The civilization had access to a variety of minerals, including copper, gold, and silver, which were used in trade with other civilizations. The region's forests provided timber for construction and fuel, while its mountains were a source of salt and precious stones. The Indus Valley Civilization was also known for its wildlife, which included a variety of animals such as elephants, tigers, rhinoceroses, and crocodiles. Evidence suggests that the civilization hunted and domesticated animals for food, clothing, and transport. However, despite its reliance on the natural environment, the Indus Valley Civilization was also known for its advanced systems of sanitation and waste management. The civilization's cities were designed with advanced systems of drainage, and evidence suggests that the civilization was well aware of the importance of hygiene and public health. Ecology of the Indus Valley Civilization played a crucial role in the civilization's development. The civilization's agricultural practices, trade, and commerce, and sanitation systems were all shaped by the natural environment, and evidence suggests
--	---	--

measures, as well as its use of seals and script, indicate a highly developed economic system.		that the civilization had a deep respect for the environment and its resources.
--	--	---

D. IMPACT ON BUILT SPACES AND ARCHITECTURE

- The architecture and town planning of the Indus Valley Civilization were highly advanced for their time, with evidence suggesting that the civilization had well-planned cities and advanced systems of water management.
- One of the most notable features of the Indus Valley Civilization's architecture was its use of baked brick as a building material. The civilization's cities were built using standardized bricks, which were used to create multi-story buildings with intricate patterns and designs. The civilization also had a sophisticated system of drainage, with evidence of covered drains and public baths.
- The cities of the Indus Valley Civilization were designed on a grid system, with streets running at right angles to one another. The cities were also divided into different sections, with residential areas separated from commercial and administrative areas. Evidence suggests that the civilization had a well-developed sense of urban planning, with public buildings, granaries, and markets situated in strategic locations throughout the cities.



Image 1. Harappan ruins showing the town planning on grid iron system (original image by Hassan Nasir).



Image 2. Harappan ceremonial vase, LA museum of art.

- The Indus Valley Civilization's cities were also fortified, with evidence of walls and gateways designed to protect the cities from external threats. The civilization's architecture was also notable for its attention to detail, with intricate carvings, sculptures, and pottery depicting animals, humans, and mythological creatures

2.2 JAIN ARCHITECTURE

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
The social structure of Jain religion in India is unique and has had a significant impact on the architecture of Jain temples and other religious structures.	Ahimsa (non-violence): Ahimsa is the cornerstone of Jain culture and is one of the fundamental principles of Jainism. Jains believe in minimizing harm to all living beings, and this	Non-violence towards all living beings: The principle of non-violence, or ahimsa, is a cornerstone of Jainism, and is applied not only towards humans

ANALYZING THE ARCHITECTURE TIMELINE OF INDIA ON SOCIAL, CULTURAL AND ECOLOGICAL PARAMETERS TO COMMENT ON FUTURE TRENDS

Jainism places a great emphasis on non-violence and compassion towards all living beings, and this is reflected in the social structure of the religion. Jain society is divided into four major groups, which are: 1. Sadhus/Sadhvis: These are the ascetic monks and nuns who have renounced all worldly possessions and live a life of strict austerity and self-discipline. 2. Shravaks/Shravikas: These are the lay followers of Jainism who provide support to the sadhus and help to preserve the religion's teachings and traditions. 3. Shrutakevalis: These are the learned scholars who have mastered the Jain scriptures and are responsible for interpreting and teaching them to others. 4. Kshullakas: These are the beginners in Jainism who are undergoing training to become sadhus or shravaks. The impact of Jain social structure on architecture can be seen in the design and construction of Jain temples. Jain temples are often designed to accommodate the different needs of the different social groups within the religion. For example, the main sanctum of the temple is usually reserved for the sadhus, while the outer areas of the temple are open to the shravaks and other lay followers. Jain temples also often incorporate elements of asceticism and austerity in their design, reflecting the lifestyle of the sadhus. For example, the use of plain white marble, simple geometric shapes, and minimal ornamentation are common features of Jain temple architecture. Additionally, many Jain temples are designed to be self-sustaining, with features such as rainwater harvesting systems.	principle is reflected in their dietary practices, lifestyle choices, and interactions with others. Vegetarianism: Jains practice strict vegetarianism, and many Jains also avoid eating root vegetables such as onions, garlic, and potatoes, as these vegetables are believed to contain a higher number of microorganisms that may be harmed during their harvesting. Asceticism: Jain culture places a strong emphasis on asceticism and self-discipline. Jain ascetics live a life of extreme austerity and renounce all worldly possessions in order to achieve spiritual purity. Rituals and festivals: Jain culture has a rich tradition of rituals and festivals, including Paryushan Parva, an eight-day festival of self-discipline and introspection, and Diwali, a festival of lights and celebration. Education: Jain culture places a strong emphasis on education and learning, and many Jain institutions of higher learning have a long and distinguished history. Philanthropy: Jains believe in the importance of giving back to the community, and philanthropy is an important part of Jain culture. Many Jains are involved in charitable activities such as building hospitals, schools, and other community facilities. Art and literature: Jain culture has a rich tradition of art and literature, including intricate paintings, sculptures, and manuscripts that depict the life of the Tirthankaras (enlightened beings) and other important figures in Jainism.	but also towards animals and other living beings. Jains believe that all living beings are interconnected and that harming any one of them is a violation of this principle. Vegetarianism: Jainism places a strong emphasis on vegetarianism and encourages its followers to adopt a plant-based diet. Jains believe that consuming animal products not only involves violence towards animals but also harms the environment and contributes to climate change. Sustainable living: Jainism encourages its followers to adopt a lifestyle of simplicity and sustainability, and to minimize their impact on the environment. Jains believe that living in harmony with nature is essential for the well-being of both humans and other living beings. Preservation of natural resources: Jains believe that natural resources such as water, air, and land are gifts from the divine and must be used responsibly. Jains have a long tradition of building and maintaining structures such as step wells and rainwater harvesting systems, which help to preserve and conserve these resources. Conservation of wildlife and habitats: Jains believe that all living beings have the right to exist and thrive, and they work to conserve habitats and protect wildlife. Many Jain institutions have established wildlife sanctuaries and conservation programs to protect endangered species and their habitats.
---	---	--

D. IMPACT ON BUILT SPACES AND ARCHITECTURE

- **Social aspects:** Jainism has a hierarchical social structure, with Jain monks and nuns at the top of the hierarchy. This social structure is reflected in Jain architecture, which often features grand temples and other structures built to honor and accommodate the needs of the Jain monastic community.
- **Cultural aspects:** Jain culture places a strong emphasis on asceticism and simplicity, and this is reflected in Jain architecture, which often features clean lines, strong ornamentation, and a focus on natural materials such as stone and wood. Jain architecture also features intricate carvings and sculptures depicting Jain deities and other important figures in Jainism.



Image 3. Dilwara temple, Mt Abu, Rajasthan (Temple showing the concept of “mountains of immortality”)



Image 4. Ornamented pillars of Jain temple, Ranakpur



Image 5. Tirthankar carvings in Jain temples, Rajasthan

- **Ecological aspects:** Jainism places a strong emphasis on non-violence and environmental sustainability, and this is reflected in Jain architecture as well. Many Jain structures feature sustainable design elements such as rainwater harvesting systems, which help to conserve water resources. Jain architecture also often features gardens and green spaces, which reflect the Jain belief in the importance of preserving and protecting the natural world.

2.3 BUDDHIST ARCHITECTURE

ANALYZING THE ARCHITECTURE TIMELINE OF INDIA ON SOCIAL, CULTURAL AND ECOLOGICAL PARAMETERS TO COMMENT ON FUTURE TRENDS

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
Monastic community: One of the defining features of Buddhism is the monastic community, which includes monks and nuns who have renounced worldly life in order to pursue a spiritual path. The monastic community played an important role in Buddhist society and culture, and many Buddhist monasteries were centers of learning and scholarship. Caste system: Buddhism rejected the caste system, which was a key feature of traditional Indian society. Instead, Buddhism emphasized the equality of all beings and rejected the idea of a hierarchy based on birth or social status. Lay community: In addition to the monastic community, there was also a lay community of Buddhist followers. This community included people from all walks of life and played an important role in supporting the monastic community through donations of food, clothing, and other necessities. Women: Buddhism provided opportunities for women to participate in religious life, which was a significant departure from traditional Indian society. Women could become nuns and participate in the monastic community, and there were also laywomen who were important supporters of the Buddhist community. Non-violence: Buddhism emphasized the principle of non-violence, or ahimsa, which was a key aspect of Buddhist social and political philosophy. Buddhist leaders advocated for non-violent resistance to oppression and advocated for the protection of all living beings.	Mindfulness and meditation: One of the central practices of Buddhism is mindfulness, which involves being aware of one's thoughts and emotions in the present moment. Meditation is often used as a tool to develop mindfulness, and is a key part of Buddhist culture. Compassion and non-violence: Buddhism emphasizes the importance of compassion and non-violence, and these values have become an important part of Buddhist culture. Buddhists often engage in acts of charity and service, and many Buddhist communities are involved in social and environmental activism. Art and architecture: Buddhist art and architecture are renowned for their beauty and intricacy. Buddhist art often depicts scenes from the life of the Buddha and other important figures in Buddhist mythology, while Buddhist architecture is characterized by structures such as stupas, pagodas, and temples. Literature and philosophy: Buddhist literature, including texts such as the Tripitaka, the Mahayana sutras, and the Tibetan Book of the Dead, has had a profound impact on philosophy and literature around the world. Buddhist philosophy, which emphasizes the impermanence of all things and the importance of non-attachment, has influenced a wide range of philosophical and religious traditions. Festivals and rituals: Buddhist festivals and rituals vary by region, but often involve offerings of food, flowers, and other items to Buddhist temples and statues, as well as the recitation of sutras and other religious texts. Some of the most important Buddhist festivals include Vesak, which commemorates the birth, enlightenment, and death of the Buddha, and Obon, which honors ancestors and the dead.	Ecology is an important aspect of Buddhism, as the religion emphasizes the interconnectedness of all living beings and the importance of living in harmony with the natural world. Here are some key aspects of ecology in Buddhism. Interdependence: Buddhism teaches that all living beings are interconnected and interdependent, and that human actions have a direct impact on the natural world. This perspective encourages Buddhists to live in a way that is mindful of the impact their actions have on the environment. Non-harm: Buddhism emphasizes the importance of non-harm (ahimsa) towards all living beings, including animals and plants. This principle encourages Buddhists to avoid actions that cause harm or destruction to the natural world. Mindfulness: Buddhism teaches the importance of mindfulness, which involves being aware of one's thoughts, emotions, and actions in the present moment. Mindfulness can help people to be more aware of the impact their actions have on the environment, and to make choices that are more sustainable and mindful of the natural world. Compassion: Compassion is a central value in Buddhism, and includes compassion for all living beings. This perspective encourages Buddhists to live in a way that is mindful of the suffering of animals and the destruction of the natural world, and to take action to reduce suffering and promote ecological sustainability.

D. IMPACT ON BUILT SPACES AND ARCHITECTURE

- Buddhist architecture is symbolic to the life teachings of Buddha. The Buddhist society was divided into two sects : the Hinayana and Mahayana. Both the sects and their structures can be easily distinguished by their beliefs; Hinayanas believed in symbolic representation of Buddha through footprints, leaves etc (this is also visible in their structures); Mahayana on the other hand believed in statue worship of Buddha (they represented Buddha in human form in the structures built by them)
- Cultural impact on Buddhist architecture can be seen from the construction of stupas, stambhas, chaityas, viharas and educational universities like Nalanda and Taxila.
- The shape of stupa is adopted from the concept of “infinite” in Buddhism
- Buddhists believed in interconnectedness of all elements; highlighting the connection between humans and nature. This is also evident in their architecture as the Viharas and Chaityas are rock cut structures ; this helped in providing closeness to nature and minimal intervention in nature to create spaces.
- Buddhist architecture highlights the life of Buddha and elements related to his teachings and preaching
- The major architectural structures created during this period are stupas, stambhas, chaityas and Viharas; all these structures are either linked to propagation of Buddhism or for Buddhist monks.



Image 6 : Sanchi stupa, Madhya Pradesh, India; depicts the Buddhist architecture. The Anda or Dome is derived from a circle as it is considered the most powerful shape in Buddhist religion. (source: archdaily.com/943846/history-of-architecture-ancient-india-and-southeast-asia)



Image 7: Buddhist Carvings Depict Buddha's Life Journey, Preaching And Teachings



Image 8: Buddhist Chaityas and Viharas, Ajanta Caves, Unesco Heritage Site.

2.4 MAURYAN ARCHITECTURE

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
The Mauryan Empire was one of the most powerful and prosperous empires in ancient India, which lasted from 322 BCE to 185 BCE. During this time, the Mauryan society was divided into different classes, based on the caste system, which was prevalent in ancient India. Highest caste was that of the Brahmins, who were the priests and scholars. They were followed by the Kshatriyas, who were the warriors and rulers. The Vaishyas were the merchants and traders, while the Shudras were the laborers and artisans. Below them were the Untouchables, who were considered to be outside the caste system and were assigned menial tasks. The Mauryan society was highly organized and was governed by a centralized administrative system. The empire was divided into provinces, which were further divided into districts, and each district was administered by a local officer. The emperor was the supreme authority and had a vast network of spies to keep an eye on the activities of his subjects. The Mauryan Empire was known for its efficient taxation system, which helped the	Mauryan culture refers to the cultural developments that took place in ancient India during the Maurya Empire, which lasted from around 322 BCE to 185 BCE. This period saw significant cultural and societal changes, particularly in the areas of religion, art, literature, and architecture. Religion played a significant role in Mauryan culture. The Maurya Empire was known for its religious tolerance, with Emperor Ashoka famously embracing Buddhism and spreading its teachings throughout his empire. This period saw the rise of several other religious sects as well, including Jainism and Hinduism. Art and architecture also flourished during the Mauryan period, with many impressive structures and sculptures being constructed. The Mauryan Empire is known for its distinctive style of stone sculpture, which featured detailed carvings of human and animal figures. Some of the most notable examples of	Climate: The Mauryan Empire was mainly located in the northern and central parts of India, which have a hot and dry climate with monsoon rains. The climate affected agriculture, as it determined the crop yields and the timing of planting and harvesting. Topography: The Mauryan Empire had diverse topography, ranging from the flat plains of the Ganges river basin to the rugged mountains of the Himalayas. The topography affected transportation, trade, and the availability of resources. Natural resources: The Mauryan Empire was rich in natural resources, such as timber, minerals, and fertile land for agriculture. The availability of these resources influenced the economy and the development of the empire. Water resources: The Mauryan Empire had a complex system of irrigation that depended on rivers,

government collect revenue from various sources, including trade, agriculture, and land. The emperor was also known for his efforts to promote trade and commerce, and he encouraged the construction of roads and the development of trade routes. The Mauryan society was deeply religious, and Hinduism and Buddhism were the dominant religions of the time. Emperor Ashoka, who ruled from 268 BCE to 232 BCE, is known for his conversion to Buddhism and for promoting its teachings throughout his empire. He also established hospitals and animal shelters and banned animal sacrifices.	Mauryan art and architecture include the Sanchi Stupa, the Ashoka Pillars, and the rock-cut caves at Ajanta and Ellora. Literature also thrived during the Mauryan period, with many important works being written. The most famous of these is the Arthashastra, a treatise on politics and governance written by the scholar and statesman Chanakya. Other notable literary works from this period include the Jataka Tales and the Buddhist texts known as the Tripitaka.	canals, and tanks. The availability of water influenced agriculture, trade, and the development of cities. Biodiversity: The Mauryan Empire was home to diverse flora and fauna, including elephants, tigers, and peacocks. The biodiversity influenced the culture and religion of the people, as well as the economy through the trade of exotic animals and plants.
--	--	---

D. IMPACT ON BUILT SPACES AND ARCHITECTURE

- **City Planning:** The Mauryan Empire was known for its well-planned cities, which were laid out on a grid system with wide, straight streets. The cities were divided into residential, commercial, and administrative areas, and were often surrounded by gardens, parks, and lakes.
- **Palace Architecture:** The Mauryan Empire built grand palaces for its rulers, such as the Palace at Pataliputra. These palaces were built on high platforms and featured ornate carvings, frescoes, and gardens.
- **Pillars:** The Mauryan Empire is famous for its highly polished sandstone pillars, which were adorned with inscriptions, carvings, and sculptures. The most famous of these pillars is the Ashoka Pillar, which still stands at Sarnath and features the emblem of the Mauryan Empire, the four-lion capital.



Image 9: Mauryan Stupa archaeological remains; also seen in the picture is a Mauryan Stambha.
(source :archdaily.com/943846/history-of-architecture-ancient-india-and-southeast-asia)



Image 10: City of Patliputra under the Mauryan empire.
(source :archdaily.com/943846/history-of-architecture-ancient-india-and-southeast-asia)

- **Stupas:** Stupas were large domed structures that served as Buddhist shrines and monuments. The most famous of these is the Great Stupa at Sanchi, which was built during the Mauryan period and is considered a masterpiece of Buddhist architecture.

**ANALYZING THE ARCHITECTURE TIMELINE OF INDIA ON SOCIAL, CULTURAL AND ECOLOGICAL PARAMETERS TO
COMMENT ON FUTURE TRENDS**

- **Fortifications:** The Mauryan Empire built strong fortifications around its cities to protect them from invaders. These fortifications were made of stone and earthworks and were often decorated with elaborate gates and towers.

2.5 GUPTA ARCHITECTURE

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
The Gupta period (c. 320 CE – c. 550 CE) in India was marked by a complex and diverse society with a distinct social hierarchy. Caste System: The caste system was firmly established during the Gupta period and was an integral part of society. The caste system divided people into different social groups based on their birth, occupation, and status. Family and Marriage: Family was an important unit of society during the Gupta period, and arranged marriages were common. Marriage was considered a sacred bond, and women were expected to fulfill traditional roles as wives, mothers, and homemakers. Education: Education was highly valued during the Gupta period, and there were many centers of learning, such as the famous Nalanda University. Education was primarily reserved for the upper castes, and women were generally not allowed to receive formal education. Religion: Hinduism was the dominant religion during the Gupta period, but Buddhism and Jainism also had a significant presence. The Gupta rulers were tolerant of other religions and supported the construction of temples and other religious structures. Trade and Commerce: Trade and commerce were important aspects of society during the Gupta period. The Gupta rulers encouraged trade and commerce, and the growth of commerce led to the development	Gupta architecture was influenced by the rich cultural heritage of India and the diverse cultural practices and beliefs of the people of the time. Hinduism: Gupta architecture was predominantly influenced by Hinduism, which was the dominant religion of the time. The Gupta temples were built to honor Hindu gods and goddesses, and were adorned with sculptures and carvings depicting stories from Hindu mythology. Buddhism: While Gupta architecture was largely influenced by Hinduism, the period also saw the growth of Buddhism, and this was reflected in the architecture of the time. The Buddhist rock-cut caves at Udayagiri and Ajanta, for example, are fine examples of Gupta period Buddhist architecture. Art and Literature: Gupta architecture was closely linked to the rich artistic and literary traditions of India. The sculptures and carvings in Gupta temples, for example, were often inspired by classical Indian literature, such as the Ramayana and the Mahabharata. Science and Mathematics: The Gupta period was a time of great scientific and mathematical advances, and this was reflected in the architecture of the time. The complex geometries and symmetries of Gupta temple architecture, for example, reflect the mathematical and scientific knowledge of the period. Regional Variations: Gupta architecture was also influenced by regional cultural practices and	Agricultural Development: The Gupta period saw significant advances in agriculture, with new techniques and technologies being developed to increase crop yields. The construction of irrigation systems and water management techniques helped to improve agricultural productivity, leading to a growth in food production. Forest Conservation: The Gupta rulers recognized the importance of forests for ecological balance, and they implemented measures to conserve and protect them. The Gupta period saw the creation of designated forest reserves and the imposition of strict penalties for unauthorized logging and deforestation. Animal Husbandry: The Gupta period was also marked by a growth in animal husbandry, with cattle, horses, and elephants being raised for agriculture, transportation, and military purposes. The Gupta rulers implemented policies to regulate the use of animals and to prevent overgrazing and other forms of environmental degradation. Trade and Commerce: The Gupta period was a time of extensive trade and commerce, with goods and commodities being transported across India and beyond. This trade led to the development of new markets and commercial centers, which had an impact on the ecology of the region. Water Management: The Gupta rulers recognized the importance of water management and implemented measures to conserve and protect water resources. They built large

of new markets and commercial centers.	traditions. For example, the temples in South India were often built in the Dravidian style, which differed from the Nagara style of North India.	reservoirs, tanks, and wells to ensure a reliable supply of water for agriculture, domestic use, and other purposes.
--	---	--

D. IMPACT ON BUILT SPACES AND ARCHITECTURE

- **Temple Architecture:** The Gupta period saw the rise of temple architecture in India. The Gupta temples were built in the Nagara style, characterized by a curvilinear tower, known as shikhara, and a pillared porch, known as mandapa. The Dashavatara Temple at Deogarh and the Vishnu Temple at Tigawa are excellent examples of Gupta temple architecture.
- **Sculptures:** Gupta period is famous for its exquisite sculptures, which adorned the walls and pillars of the temples. The sculptures depicted Hindu gods and goddesses, as well as secular subjects such as kings, queens, and courtiers. The Buddha sculptures at Sarnath and the Vishnu sculptures at Deogarh are fine examples of Gupta sculpture.
- **Fortifications:** The Gupta period saw the construction of strong fortifications around cities, which were built to protect them from invaders. These fortifications were often made of brick and were decorated with elaborate gates and towers.
- **Caves:** Gupta period also saw the creation of cave architecture, which was inspired by the earlier rock-cut caves at Ajanta and Ellora. The Udayagiri Caves and the Barabar Caves are notable examples of Gupta period cave architecture.
- **Town Planning:** The Gupta period is also known for its well-planned towns and cities, with wide, straight streets and well-organized residential and commercial areas. The ancient city of Pataliputra, which was the capital of the Gupta Empire, was one of the most well-planned cities of its time.
- **Sandstone Construction:** The Gupta temples were primarily constructed using sandstone, which was abundant in the region. Sandstone was relatively easy to carve and could be used to create intricate decorative elements.
- **Symmetry and Geometry:** Gupta temple architecture was marked by a high degree of symmetry and geometry. The temples were often designed around a central axis, and the layout and decoration were carefully planned to create a harmonious and balanced structure.
- **Multi-storeyed Temples:** The Gupta period saw the development of multi-storeyed temples, with each level being progressively smaller and more intricately decorated. This created a sense of height and grandeur and allowed for more complex decorative elements.



Image 11: Gupta temple architecture in it's early stage. (Dasavatar temple, Deogarh)(source: wikipedia)

2.6 CHOLA ARCHITECTURE

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
The Chola dynasty, which ruled over southern India from the 9th to the 13th century, was a period of great cultural and societal growth. Administration: The Chola dynasty was known for its efficient and sophisticated system of administration. The society was divided into different administrative units, and each unit had its own set of officials who were responsible for its governance. Economy: The Cholas were great patrons of agriculture, and the economy was primarily agrarian. Trade and commerce also flourished during this time, and the Cholas had a well-developed system of inland and maritime trade. Education: Education was highly valued in Chola society, and there were several centers of learning across the kingdom. The Cholas were patrons of education	Temple architecture: The Cholas were great patrons of temple construction and renovation, and their period is known for its magnificent temple architecture. The temples were not just places of worship but also centers of economic and social activity, and the Cholas' temple building projects helped stimulate the local economy. Religion: The Cholas were followers of Hinduism, and the society was deeply religious. Temples were not only places of worship but also centers of economic and social activity. The Chola kings	Agriculture: The Cholas were great patrons of agriculture, and the economy was primarily agrarian. The Cholas encouraged the development of irrigation systems and the use of advanced agricultural techniques, such as crop rotation and land management, which helped to increase crop yields and ensure food security. Forest conservation: The Cholas recognized the importance of forests for ecological balance and conservation. They took measures to protect the forests and regulate their use by enforcing strict laws against deforestation, hunting, and poaching. Animal conservation: The Cholas were also concerned about the conservation of wildlife and took measures to protect endangered species. They enforced strict laws against hunting and poaching, and some animals were considered sacred and protected by religious laws.

and encouraged the development of literature, music, and the arts. Social hierarchy: Chola society was divided into different social classes, with the Brahmins (priests and scholars) occupying the highest rung of the social ladder. However, social mobility was possible, and people could move up the ladder through education, wealth, and achievement. Women's roles: Women played an important role in Chola society and had considerable freedom and autonomy. They could own property, participate in economic activities, and even serve as temple priests in some cases. However, patriarchal norms were still prevalent, and women's roles were largely defined by their relationship to men.	were known for their patronage of temple construction and renovation. Art and literature: The Chola dynasty was a period of great artistic and literary growth. The Cholas were known for their exquisite bronze sculptures and intricate temple architecture. Literature also flourished during this time, with works in Tamil, Sanskrit, and other languages.	Water management: The Cholas were pioneers in water management, and they developed sophisticated systems of irrigation and water storage. They built several large tanks and canals, which helped to conserve water during times of drought and ensure a reliable supply of water for agriculture and other purposes. Maritime ecology: The Cholas were seafaring people, and they had a deep understanding of marine ecology. They took measures to protect marine life and regulate fishing, and some species of fish were considered sacred and protected by religious laws.
--	--	---

D. IMPACT ON BUILT SPACES AND ARCHITECTURE

- **Temple architecture:** The Cholas were great patrons of temple construction, and their period is known for its magnificent temple architecture. The temples were not just places of worship but also centers of economic and social activity. The Chola temples were known for their intricate carvings, towering gateways, and massive gopurams (temple towers).
- **Dravidian style:** The Chola period saw the development of the Dravidian style of temple architecture, which is characterized by the use of elaborate gopurams, mandapams (pillared halls), and vimanas (temple towers). The Dravidian style of architecture is still widely used in southern India today.
- **Town planning:** The Cholas were also known for their sophisticated town planning. The Chola towns were planned on a grid pattern, with streets running perpendicular to each other. The towns were also divided into different sections, with separate areas for residential, commercial, and religious activities.
- **Forts and palaces:** The Cholas also built several magnificent forts and palaces. The Chola forts were known for their massive walls, moats, and gateways, and were designed to withstand enemy attacks. The Chola palaces were built on a grand scale, with large courtyards, intricate carvings, and elegant pavilions.
- **Irrigation systems:** The Cholas were pioneers in water management, and they developed sophisticated systems of irrigation and water storage. The Chola irrigation systems included several large tanks and canals, which helped to conserve water during times of drought and ensure a reliable supply of water for agriculture and other purposes.



Image 12 : Dravidian style of temple (Brihadeshwara temple, Tanjavur) (source: wikipedia)

2.7 SLAVE DYNASTY ARCHITECTURE (FIRST SULTANS OF DELHI)

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
The period of the first sultans of Delhi, also known as the Slave Dynasty, lasted from 1206 to 1290. It was a period of significant social, economic, and cultural change in northern India. Here are some key aspects of society during the reign of the first sultans of Delhi: Muslim rule: The establishment of the first sultanate of Delhi marked the beginning of Muslim rule in northern India. This had a significant impact on Indian society, as the new rulers brought with them their own cultural, social, and religious practices. Persian influence: The first sultans of Delhi were of Turkish origin, but they were heavily influenced by Persian culture. Persian became the official language of the court, and Persian	Architecture: The sultans of the Slave Dynasty were great patrons of architecture and built several magnificent structures, including the Qutub Minar, the Alai Darwaza, and the Jama Masjid in Delhi. These structures were built in a style that blended Indian and Persian architectural elements. Calligraphy: Calligraphy was another art form that flourished during the Slave Dynasty. Persian calligraphy was particularly popular and was used to decorate buildings, manuscripts, and other works of art.	Urbanization: The first sultans of Delhi were known for their patronage of architecture and urbanization. They built several new cities, including Delhi and Jaunpur, and many of these cities had sophisticated water management systems, public works, and markets. The rapid urbanization during this period had a significant impact on the local ecology, as forests were cleared and water sources were diverted to meet the needs of the growing population. Water management: The sultans of the Slave Dynasty were known for their sophisticated water management systems. They built several artificial lakes and tanks to store rainwater and constructed wells and canals to distribute water to the population.

literature, art, and architecture flourished during this period. Social hierarchy: The social hierarchy in medieval India was based on the caste system, but under the sultans, a new class of aristocrats emerged. This class was based on loyalty to the sultan, rather than birth or caste. Urbanization: The first sultans of Delhi were known for their patronage of architecture and urbanization. They built several new cities, including Delhi and Jaunpur, and many of these cities had sophisticated water management systems, public works, and markets. Sufi influence: Sufism, a mystical Islamic tradition, had a significant impact on Indian society during this period. Many Sufi saints traveled to India and established centers of learning and devotion. Sufism emphasized the importance of personal experience and inner spirituality, and it had a significant impact on Indian literature, music, and art. Slavery: The first sultans of Delhi were known for their use of slaves, who were primarily obtained through military conquests. Slavery was an integral part of the economic and social system during this period.		These systems were essential for the survival of the growing urban population, but they also had a significant impact on the local ecology, as water was diverted from its natural course and habitats were altered. Agriculture: Agriculture was the main source of livelihood during the Slave Dynasty. The sultans introduced new crops and irrigation techniques to improve agricultural productivity, which led to increased food production and population growth. However, this also led to the expansion of agriculture into previously forested areas, resulting in deforestation and soil degradation. Hunting: Hunting was a popular pastime among the ruling class during the Slave Dynasty. The sultans and their nobles hunted wild animals for sport, which led to a decline in the local wildlife population and disrupted the local ecology. Mining: Mining was an important industry during the Slave Dynasty. The sultans encouraged the extraction of precious metals and minerals, which led to the destruction of forests and habitats and disrupted the natural ecological balance.
--	--	---

D. IMPACT ON BUILT SPACES AND ARCHITECTURE

- **Persian influence:** The sultans of the Slave Dynasty were of Turkish origin but were heavily influenced by Persian culture. Persian architectural elements, such as domes, arches, and intricate tilework, were incorporated into their buildings.
- **Mosques:** Mosques were an important part of the architecture during the Slave Dynasty. The sultans built several magnificent mosques, including the Qutub Minar complex in Delhi, which includes the Qutub Minar, the Alai Darwaza, and the Quwwat-ul-Islam Mosque. These mosques were built in a style that blended Indian and Persian architectural elements.
- **Forts and palaces:** The sultans also built several forts and palaces, which were used for military and administrative purposes. The most famous of these is the Red Fort in Delhi, which was built by Sultan Shah Jahan in the 17th century. The Red Fort is a UNESCO World Heritage site and is considered one of the most important examples of Mughal architecture.
- **Tombs:** Tombs were another important part of the architecture during the Slave Dynasty. The sultans built several magnificent tombs, including the tomb of Sultan Iltutmish in Delhi, which is considered one of the finest examples of Islamic funerary architecture.

ANALYZING THE ARCHITECTURE TIMELINE OF INDIA ON SOCIAL, CULTURAL AND ECOLOGICAL PARAMETERS TO COMMENT ON FUTURE TRENDS

- **Caravanserais:** Caravanserais, or resting places for travelers, were an important part of the architecture during the Slave Dynasty. These were built along the trade routes to provide shelter and protection to travelers. The most famous of these is the Hauz Khas complex in Delhi, which includes a mosque, a tomb, and several caravanserais.
- The slave dynasty was the founding brick for Islamic rule in India; they brought with them immense changes in the society and culture of India. Islam was introduced as a religion to the Hindu population; Persian and Turkish influences were seen in the day to day life along with its strong influence on the new buildings built during this phase. One major architectural fact of this phase was the usage of destroyed Jain and Hindu temples elements in the construction of Islamic structures. Although this remains a debated and sensitive topic; the site of Quwwat-ul-Islam Mosque in Delhi has Jain columns in the courtyard. The demolition of existing prayer spaces and introduction of new typology of prayer structures shows insensitivity towards the existing religion and the need to portray power through destruction.



Image 13: Alai Darwaza (Introduction of Persian Domes in Indian architecture.)
(source: wikipedia)



Image 14: Quwwat ul Islam Mosque (Hindu temple and Jain temple columns are used in the structure)(source: wikipedia)

2.8 Mughals Period

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
The Mughal Empire was ruled by a monarch, the emperor, who had absolute authority over his subjects. The society was divided into four main classes: the ruling class, the nobility, the common people, and the untouchables. Religion played an important role in Mughal society, and the empire was known for its religious tolerance. Islam was the dominant religion, but other religions such as Hinduism, Sikhism, and	The Mughal Empire had a significant impact on Indian culture, as the Mughals themselves were influenced by the existing Indian culture and traditions. The Mughals integrated themselves into the local culture and adopted many Indian customs, such as the use of the Hindi and Persian languages in their court, the practice of vegetarianism, and the use of Indian-style clothing. The Mughals also contributed to the development of Indian culture by	Development of water management systems: The Mughals built several large-scale water management systems, including canals, aqueducts, and reservoirs, to irrigate their farmlands and provide drinking water to the people. They also

Christianity were also practiced. The emperor was seen as a representative of God on earth and was expected to be just and equitable towards his subjects, regardless of their religious beliefs.

The Mughal Empire was known for its arts and culture. The rulers were great patrons of the arts and literature, and many famous poets, writers, and artists flourished during this period. The architecture of the Mughal era was characterized by grand structures such as the Taj Mahal, Agra Fort, and Red Fort. The Mughals also contributed significantly to the development of Indian music, dance, and cuisine.

Mughal India was a society with a highly hierarchical social order, where religion and culture played an important role in shaping people's lives.

introducing new ideas and practices. For example, the Mughals brought with them the art of miniature painting, which was influenced by Persian and Central Asian styles but also incorporated Indian elements. This art form flourished during the Mughal era and produced some of the most exquisite examples of Indian art.

Similarly, Mughal architecture was a blend of Persian and Indian styles, resulting in the creation of unique structures such as the Taj Mahal, which is considered one of the most beautiful buildings in the world.

The Mughal Empire had a significant impact on Indian culture, as the Mughals themselves were influenced by and integrated themselves into the local culture. The Mughals introduced new ideas, practices, and art forms, which blended with the existing Indian culture to create a rich and diverse cultural heritage.

constructed stepwells, which were elaborate structures designed to store water during the dry seasons. These systems helped increase agricultural productivity and ensured a stable water supply in the arid regions of North India.

Development of horticulture:

The Mughals were renowned for their love of gardens and horticulture. They created elaborate gardens with fountains, pools, and pavilions, such as the Shalimar Bagh in Kashmir and the Nishat Bagh in Srinagar.



Image 15: Mughal paintings showing mughal darbar(source: wikipedia)

D. IMPACT ON BUILT PACES AND ARCHITECTURE

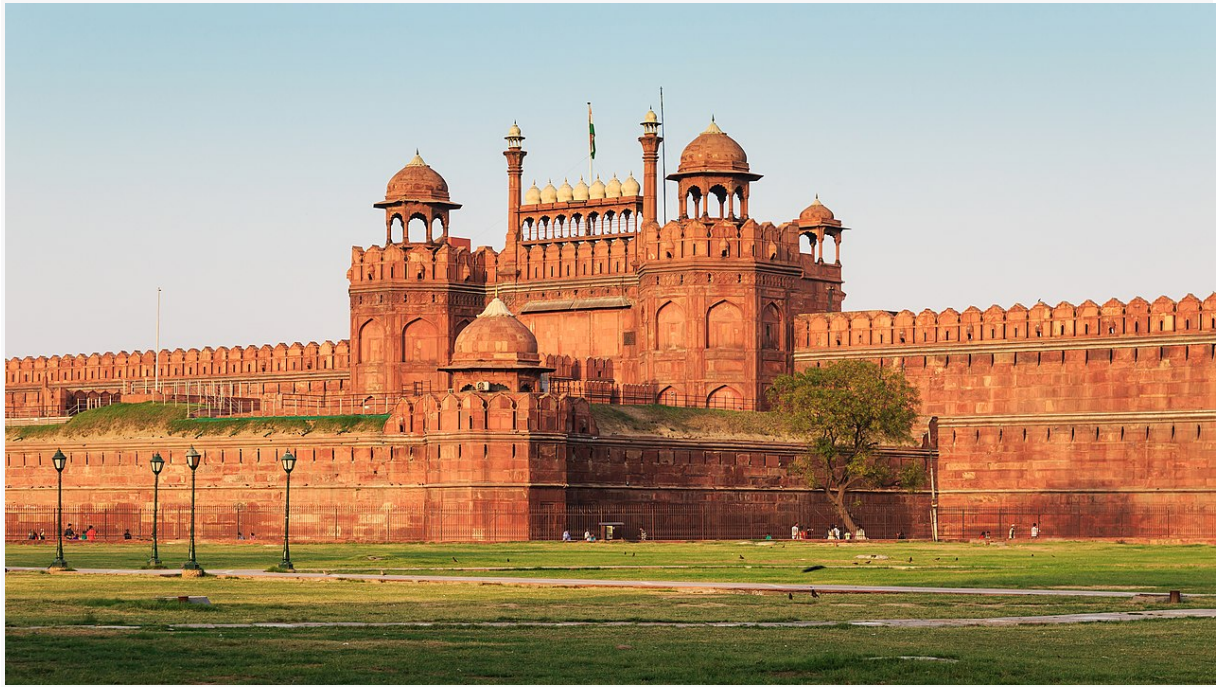


Image 16 : The majestic red fort, powerhouse of Mughal kingdom (source: wikipedia)

- Mughals brought with them the epitome of Marble architecture in India. Since they ruled the majority of the Indian region; their architecture style and elements are predominantly visible on the Indian map.
- Mughals also started the concept of “city construction” in India; the seven cities of Delhi evolved during the Islamic rule. This concept of fortified capital cities did not exist at this scale before.
- There was also a stark contrast between the existing Hindu architecture and the new Islamic architecture in the methods of building construction. Hindu vastu shastra believes in the idea of beam and column architecture (since an arch never sleeps); Islamic rule brought the idea of spanning spaces with arches to India. Also the concept of Persian Domes were introduced by the Islamic rulers to India.
- It is evident from the case of Mughal architecture in India that the religion of the king plays a significant role in the architecture and planning of a region. Rulers promote their religion and beliefs through built spaces. In the case of Islamic rule in India; the vast construction of Mosques and Madrasas in an area with maximum Hindu population is showcasing the concept of insensitivity towards the religion of the native population and supremacy of the ruling class.
- Architecture became the foundation for “power” in Mughal rule.
- The Mughals used red sandstone and marble extensively in their buildings, which gave them a distinctively elegant appearance. The use of marble in particular was a hallmark of Mughal architecture, and it was often used for decorative elements such as inlay work, filigree screens, and lattice windows.
- Mughal buildings were designed to be symmetrical and balanced, with a focus on geometric patterns and proportion. This was achieved through the use of domes, arches, and minarets, which were often arranged in a symmetrical fashion.
- Mughal buildings were decorated with intricate carvings, tile work, and calligraphy, which were inspired by Islamic and Persian art. These decorations were often inlaid with precious stones such as lapis lazuli, agate, and jasper, and were used to create intricate floral and geometric patterns.



Image 17 : Taj Mahal an impression of symmetry, balance and proportion by mughals into Indian architecture. (source: wikipedia)

2.9 The British Period

A. SOCIAL PARAMETERS	B. CULTURAL PARAMETERS	C. ECOLOGICAL PARAMETERS
India's social structure during British colonial rule was deeply rooted in the caste system, but there were also attempts made to challenge and reform this system. Western education and the emergence of a new middle class played a key role in India's progress during this time, but the British government's policies of divide and rule also had negative impacts on India's social fabric.	The culture of India during British India was complex and varied. On the one hand, there were many traditional cultural practices and beliefs that continued to be practiced by Indians. On the other hand, British colonialism had a significant impact on Indian culture, particularly in terms of language, education, and religion. One of the most significant impacts of British colonialism on Indian culture was the spread of English as a language of education, commerce, and administration. The British introduced English education in India, which had a significant impact on the Indian education system. English became the medium of instruction in schools and colleges, and many Indian students began to adopt British values and culture. British colonialism also had a significant impact on Indian art and literature. Indian artists and writers were often inspired by British culture and literature, leading to the	During British rule in India, there were some efforts made to preserve the Indian ecology, but these were largely motivated by economic concerns rather than environmental or ecological concerns. Forest Conservation: The British government introduced forest conservation laws to protect forests from overuse and deforestation. This was done primarily to protect the supply of timber and other forest products for British industries. Wildlife Preservation: The British government also established several wildlife reserves and national parks, including Jim Corbett National Park and Kanha National Park, to protect endangered species such as tigers and elephants. Irrigation Systems: The British built many irrigation systems in India to improve agricultural productivity. This helped preserve the ecology by reducing pressure on natural water sources. Soil Conservation: The British introduced methods of soil conservation to prevent soil erosion and degradation. This included

	emergence of a new genre of literature that was both Indian and British. Despite the many changes brought about by British colonialism, traditional Indian cultural practices and beliefs continued to be practiced. The caste system, for example, remained a defining feature of Indian society. However, British colonialism did bring about significant social and cultural changes that continue to shape India's culture today.	terrace farming, contour plowing, and the use of green manure. Railway Network: The British built a vast railway network in India to facilitate trade and commerce. This helped to reduce pressure on the environment by reducing the need for transportation by road and water. However, it is important to note that these efforts were often driven by economic considerations rather than a genuine concern for the environment. For example, the conservation of forests was mainly done to ensure a steady supply of timber for British industries, rather than for ecological reasons.
--	---	---

D. IMPACT ON BUILT SPACES AND ARCHITECTURE

- **Indo-Saracenic Style:** The British introduced the Indo-Saracenic style of architecture, which combined elements of Indian, Islamic, and European styles. This style was characterized by the use of red sandstone, arches, domes, and intricate carvings. Some of the most famous examples of Indo-Saracenic architecture in India include the Victoria Memorial in Kolkata and the Gateway of India in Mumbai.
- **Public Buildings:** The British built a number of public buildings during the Raj, including hospitals, schools, colleges, and government offices. These buildings were often built in the Indo-Saracenic style and were designed to be functional as well as aesthetically pleasing.
- **Railway Stations:** The British built a number of railway stations in India, many of which were designed by British architects. These stations were often grand and imposing, with high vaulted ceilings, ornate pillars, and intricate carvings.
- **Town Planning:** The British introduced modern town planning techniques to India, including the concept of the "garden city". They built new cities, such as New Delhi, which were designed to be functional and efficient. They also introduced zoning laws, which separated residential and commercial areas.



Image 18: Victoria Memorial at Calcutta exhibits the British influence on Indian architecture. (source: wikipedia)

- **Bungalows:** The British introduced the concept of the bungalow, a type of single-story house with a large veranda. These houses were often built in the countryside and were designed to be cool and airy.

- The transition of architecture during the British was evident and drastic. Before the Britishers; the concept of “public administrative buildings” in India did not exist; it was with them that the idea of Administrative uniformity surfaced both in practice and architecture. This changed how the society functioned by introducing the concept of “public buildings” in the Indian scenario. British architecture in India is more of a replica of the British society and culture; of course there has been amalgamation of Indian- Islamic style in the elements of the structures but this was only because of the geographical or labor proficiency related reasons rather than the idea of adopting or appreciating the existing architecture styles.
- A colonial ruler tries to implement their philosophies and ideas on the natives because of their belief of superiority. Any advancement in the native architecture style of urban fabric is not for the betterment of the natives rather it is for the luxury and comfort of the colonial power.

3. Inference and discussion

India gained independence from the British in 1947 to become a democratic country. After 300 years of colonial rule; India had become wounded culturally, economically and ecologically at the time of independence. The main aim at the moment was to gain stability; politically and economically. In these 78 years of independence; India has seen drastic changes in every tangible and intangible aspect for the first time. There has been mass urbanization, immense population growth, technology advancements, liberalization of trade and climate crisis. People now have access to global information and their lives have become complex, competitive and fast. We have moved from the traditional houses with “angans” to matchbox flats with balconies. Our environment, society, culture is changing continuously at a pace that cannot be matched or followed, this is happening for the first time in History. Earlier (as evident from the timeline) changes were slow and allowed Humans to adapt; but with the inclusion of technology in our lives; change has become a part of daily routine.

This has resulted in “fast” architecture being prevalent in Indian cities. By definition “Fast architecture” would mean a trend that is generally copied using technology and implemented in a site that is not suitable for it. Due to the inept nature of “fast” architecture; it becomes inhospitable and the lifespan of the buildings have decreased. Indian architecture needs to connect with the people and the context of the site. Every structure built or designed must have an essence attached to it.

From the timeline of architecture discussed above it can be noted that society, culture and ecology played a crucial role in defining the built spaces of a period. The following points summarize the review of Indian architecture timeline on social, cultural and ecological parameters.

- Planning of spaces is a complex process; this must involve the ecology, economy and society in the forefront. Every architectural element is unique and must be designed to suit the requirements of the population rather than reproduced as a prototype.
- Architecture cannot be influential unless it is designed keeping in mind the aspirations of the people along with provision of necessary services; it must show the development of the society, integrate latest technologies and address the existing issues.
- Equality and Equity in society helps in the growth of a civilization; it helps in evolution and progression in the field of architecture and space planning.
- Social, ecological and cultural factors have a direct impact on the architecture; along with these technologies, latest trends, human centric approach also plays a crucial role in holistic progress of the field.
- The influence of Technology into Architecture will be making the focus more towards function and usage of built space.

In India, current societal, cultural, and ecological contexts are shaping emerging trends in architecture. Architects are incorporating sustainable and eco-friendly designs, traditional and modern design elements, smart homes and buildings, mixed-use developments, and community-driven design into their projects. Sustainability is becoming increasingly important in the face of climate change, with architects

using renewable materials and energy-efficient systems. The integration of traditional design elements into modern buildings creates a unique aesthetic and helps preserve India's cultural heritage.

Society today is strongly a mix of diverse people living together, United or divided on the basis of caste, creed, color, economic status, work profile, regional identity, religion, culture etc. The common thing among them is everyone is working everyday to make their life a better tomorrow. The economic Divide is evident but the struggle to move up is a continuous effort. The common tradeoff for product and services is standardized in the form of currency. Strong influence of technology can be seen in everyday activity.

Culture is the result of unity and diversity of population living together, It has a dominating identity based on religion. Since over the History Indian subcontinent is controlled by many rulers which makes a strong impression on people. The amalgamation of different cultures is what makes today's Indian culture. It is more liberal until it does not hinder the sentiments of the diverse population. Technology in itself becomes a culture of people. Connectivity in terms of communication and transport is prime interaction.

Smart technology is driving the development of efficient, comfortable, and secure living spaces. Mixed-use developments that combine residential, commercial, and retail spaces in one building or complex are popular for promoting walkability and efficient use of spaces. Architects are working collaboratively with communities and stakeholders to develop designs that meet their needs and aspirations. This approach fosters a sense of ownership and pride amongst the stakeholders. The future of Indian architecture and space planning must integrate **human centric approach** in its design process and consider the societal, cultural and ecological scenario in the forefront.

4. References

Medha Kulkarni, History of Indian Architecture [Part 1], Architect's lounge, Rethinking the Future

Medha Kulkarni, History of Indian Architecture [Part 2], Architect's lounge, Rethinking the Future

Bhat AH. The Indus valley civilization. International Journal of Research and Review. 2017; 4(7):106-109.

Vikram Rana, (2008), Cholas of Tanjore: Society, Polity, Economy and Culture.

Mouez Khalfaoui, (2009), Indian Architecture: Social and Political Challenges.

Dr. Parduman Singh, ECONOMIC, SOCIAL AND CULTURAL IMPACT OF BRITISH RULE ON INDIA, International Journal of Research in Economics and Social Sciences(2015) (IJRESS).

Christopher Tadgell(1990), History of architecture in India.

Percy Brown(2013), Indian architecture (Hindu and Buddhist).

F.R Allchin(1995), Archeology of early historic South Asia, chapter: 11, Mauryan art and architecture.

<https://ecologicalprocesses.springeropen.com/articles/10.1186/s13717-014-0022-9>

<https://repozytorium.amu.edu.pl/bitstream/10593/4498/1/06-Khalfaoui.pdf>

<https://www.historydiscussion.net/articles/cholas-of-tanjore-society-polity-economy-and-culture/2008>

<https://euroasiapub.org/wp-content/uploads/2016/12/46ESSNov-4377-1.pdf>

**ANALYZING THE ARCHITECTURE TIMELINE OF INDIA ON SOCIAL, CULTURAL AND ECOLOGICAL PARAMETERS TO
COMMENT ON FUTURE TRENDS**

Arzoo Kadian is an assistant professor in School of architecture, world university of design, She holds a bachelor degree in architecture from JNTU,Hyderabad and masters in urban planning from DCRUST,Sonepat. Her field of interest is History of architecture and built spaces.

Akshay Bhandral is an Assistant Professor in is an assistant professor in School of architecture, world university of design, He Acquired B.Arch from NIT Hamirpur and M.Technology from IIT kharagpur. He believes that History is A guide to explore the future and define larger goals for development.