

Symbolis of Shivai Temples in Dravid Architecture: Influenced by Dravidian Style

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Abstract

This paper focuses on studying different design features and concepts which act as symbolism in Dravid architecture. Then, historical methods that strike a balance between form and function as well as elements that have influenced the evolution of both historical and contemporary building methods. The earliest phases of Shiva temple construction began during the early Palava's empire in southern India, and here is where Dravid architecture originated. Dravidian design characteristics are more commonly found in Shiva temples. Several design elements, such as historical significance, conceptually based designs, neighboring scenes, and many more, can make a building structure renowned. There are several aspects that contribute to a building structure becoming famous. Hindu temple architecture with variety of styles and ornamenting features is a part of tradition. They are different styles dedicated to different regions and gods. However, because of people's carelessness and lack of knowledge, the architecture of the temples has been gradually changing through the generation evolves. The analytical research highlights Dravidian style shiva temples and design principles for construction of shiva temples and by what design features some shiva temples stood as an example for Dravidian style.

Keywords: Hindu temple architecture, Dravidian style, Vimana, Mandapas, Garbhagriha, Shikara, Gopuram, Vastu Purusha

1. Introduction

One of the most important steps in the Planning process is the "designing" phase. Given the multitude of disciplinary perspectives that claim to dominate the design process, it is extraordinarily challenging to characterize conceptually. It is crucial for architecture to serve societal practical demands as well as its structures' goals. Architectural forms become symbolic when they are used as the means of expressing content in plan, height, and ornamentation. When applied symbolically, a building's layout conveys ideas through shape. Temples is designed with major factor i.e Vastu where the basic form is evolved from geometry called vast purusha mandala (1).

The vastu is a traditional style of temple building construction which has been tried and tested by many builders. The power that exists in the universe is vastu, but it is invisible to human eye in order to visible humans changed the vastu using five elements of the universe. The energy acts at every corner of the space. The vastu and science are related in terms of sound, light and vibration which are main forms of energy for universe and human beings. Shapes and forms are key factors to build a structure. Hindu temples buildings are evolved from human beliefs and cultures. It is important to consider vastu in order to design the temples purposefully.

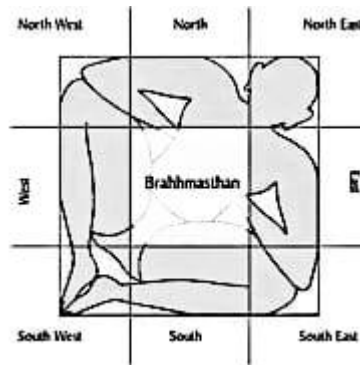


Fig 1: Vaastu Purusha Mandala, Govinda Krishna Pillai. (n.d.). Hindu Architecture (Vastu and Silpa Sastra) (2015th ed.). BHARATIYA KALA PRAKASHAN.

However, in modern construction of temples there is no implementation of complete vastu. Shape and form play a vital role in designing temples where every shape is not applicable to take for temple building construction. But shape and massing act as symbolism in expressing a building. The planets and other natural phenomena, the circle has been utilized in architectural designs for homes, tombs, and places of worship since prehistoric times and throughout numerous cultures. It also acquired a spiritual and symbolic meaning. It was eventually used for idol cults, shrines, and memorabilia in both the East and the West through gradual processes. When construction methods are allowed, its meaning frequently blended with the dome's.

Example: The square represents divine harmony in Hindu temple architecture (2).

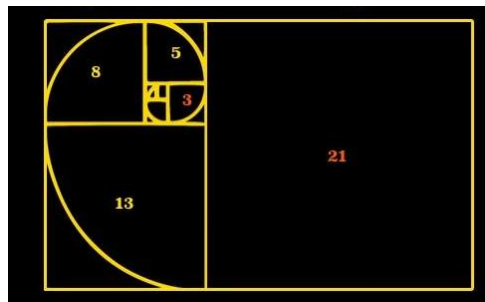


Fig 2: Concept of Golden Ratio Kak, S. (n.d.). Space and Cosmology in the Hindu Temple.

2. The Hindu Temple

Hindu Temple is a building intended to foster devotion, sacrifice, and prayer between Hindus and the gods. It is regarded as the god's home, to whomever it is devoted.

Hindu temple architecture and iconography are derived from Vedic traditions and feature squares and circles. Along with representing repetition, it also illustrates how astronomical numbers and "specific placements related to the topography of the location. Temples are a blend of the arts, dharma principles, beliefs, values, and the manner of life that Hinduism cherishes. It serves as a bridge in a hallowed setting between humans, gods, and the Universal Purusha(1).

Every element of the cosmos, from fire to water, from gods to representations of the natural world, from genders that are feminine or male to those that are eternal and universal, can be found in a Hindu temple. Hindu temples are religious buildings in addition to places of worship. Their significance and purpose now encompass social rituals and everyday life in addition to spiritual life, providing a social dimension. Hindu temple architecture is a combination of the art forms, numbers, and the way of life that Hinduism

holds important. The temple is a site for pilgrimages known as Tirtha. It incorporates all the universe components that give rise to and rejoice life in the Hindu pantheon, from fire to water, from nature images to gods, from the feminine to the male, from kama to artha, from transient sounds and incense scents to Purusha—the eternal nothingness yet equality. High-quality temple architecture emerged in nearly all parts of ancient India.

The building of ancient temples in various regions was influenced by differences in geography, climate, racial makeup, history, and language. There are three main categories into which ancient Indian temples can be divided. This classification is based on the various architectural styles that were used to build the temples. It all started with Gupta period the very beginning of Hindu Temples(3).

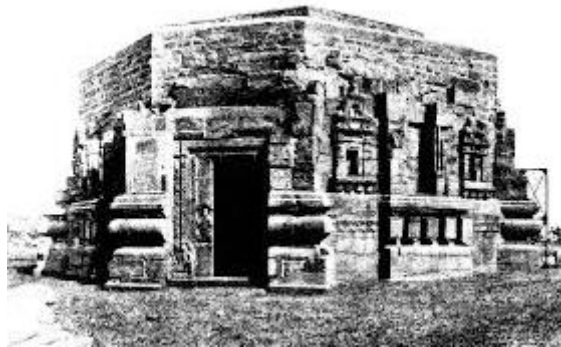


Fig 3: First Indian Gupta Period Temple “Mundeshwari Temple” Ail, A. (2023, January 25). Beyond the Taj, 7 wonders of India to visit in 2023. Condé Nast Traveller India. <https://www.cntraveller.in/gallery/beyond-the-taj-7-wonders-of-india-to-visit-in-2023/>

A. Design Principle

- Ancient Sanskrit literature advises that the right location for a mandir is next to gardens and water, where lotuses and flowers blossom, where ducks, swans, and other birds may be heard, and where animals can rest without worrying about getting hurt (4).



Fig 4: 8 th century “Masrur temple” Ail, A. (2023, January 25). Beyond the Taj, 7 wonders of India to visit in 2023. Condé Nast Traveller India. <https://www.cntraveller.in/gallery/beyond-the-taj-7-wonders-of-india-to-visit-in-2023/>

- While important Hindu temples are advised to be built in Sangam’s (river confluences), riverbanks, lakes, and the seaside, the Puranas indicate that temples can be built as well in locations without natural water sources.
- They advise building a pond with water gardens here as well, ideally in front of or to the left of the temple.

Water is metaphorically present during the deity’s or temple’s consecration if it is not there by purpose or by nature.

- The design, especially the floor plan, of the part of a Hindu temple around the sanctum or shrine follows a geometrical design called vastu-purusha-mandala (5).

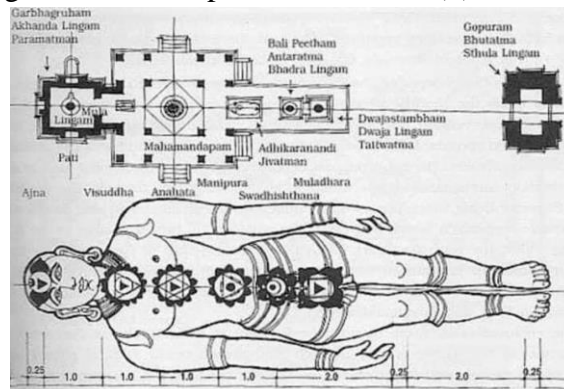


Fig 5 : Planning based on Vastu Purusha Govinda Krishna Pillai. (n.d.). Hindu Architecture (Vastu and Silpa Sastra) (2015th ed.). BHARATIYA KALA PRAKASHAN.

- The name is a composite Sanskrit word with three of the most important components of the plan.
- Mandala means circle, Purusha is universal essence at the core of Hindu tradition, while Vastu means the dwelling structure.
- An ideal square is built in the available area around the axis of a Hindu temple, which is created in part by the four cardinal directions. The square is bounded by the mandala circle (6).
- Given its perfection and status as a product of human knowledge and intellect.
- The square is revered as holy, but the circle is seen as earthly, human, and found in common objects such as the moon, sun, horizon, water drop, and spectrum. Each helps the other.

25	26	27	28	29	30	31	32	1
VYU	NAGA	MURHYA	BHAL LATA	SAURYA	MRGA	ADITI	UCITI	ISA
24	RUDRA- JAYA						MTRA- JAYA	2
PAPA- YAKSMA								VATAPAR- JANYA
23		RUDRA	PRTHIVIDHARA			APR. UTSA		3
SOSA								JAVANTA
22								4
ASURA								MARUTA
21								5
VARUNA								SAVENE- DRAL
20								6
PUSPA- DANTA								SATYAKA
19								7
SOORVA		INDRA	VIVASVAT			SAVITRI		BHRISA
18								8
DAU- VASKA								ANTA- RIKSA
17								9
NIRTA	16	15	14	13	12	11	10	AGNI
	MISA	BHRISRA- RAJA	GANDI- HARVA	YAMA	GIRNAC- DATA	VITATHA	PUSAN	

Fig 6: Manduka Mandala (64 Padas) Govinda Krishna Pillai. (n.d.). Hindu Architecture (Vastu and Silpa Sastra) (2015th ed.). BHARATIYA KALA PRAKASHAN.

- Perfect square grids split up the square. This is often an 8x8 or 64-grid construction found in major temples. Within the superstructures of ceremonial temples, this is an 81-sub square grid. The squares are referred to as “padas” (6).
- The square has symbolic roots from the fire altar, Agni, in Vedic tradition. Like this, the alignment along the four directions is an expansion of the Vedic three-fire ceremonies.
- Design plans for Hindu temples are documented in manuals with 1, 4, 9, 16, 25, 36, 49, 64, 81, and up to 1024 squares; the smallest plan, known as 1 pada, is for a hermit or devotee to sit and meditate, perform yoga poses, or make offerings with a Vedic fire in front.

- The second pattern of the four padas is meditative in nature and features a symbolic central core at the diagonal connection.
- The 9 pada design (7), which serves as the model for the smallest temple, features a sacred center surrounded by circles.
- The 9 through 49 pada series may be used in ancient Hindu temple vastu mandalas, although the 64 geometric grid is revered most in Hindu temples. It is known by several names in some old Sanskrit literature as Manduka, Bhekapada, or Ajira.

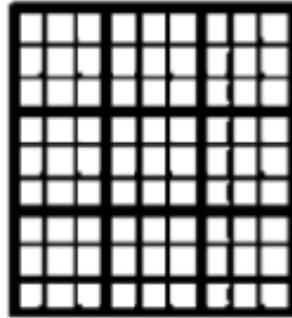


Fig 7: 9 Padas(Paramasaayika Mandala) Govinda Krishna Pillai. (n.d.). Hindu Architecture (Vastu and Silpa Sastra) (2015th ed.). BHARATIYA KALA PRAKASHAN.

- The conceptual assignment of every pada is to a symbolic element, which may take the shape of a spirit, apasara, or deity.
- The central square or squares of the 64 are known as Brahma padas and are devoted to the Brahman, who is not to be confused with a Brahmin (6).
- Hindu temples are built with certain architectural features whose meanings are intended to serve as a bridge connecting humanity and the divine, facilitating the latter's journey towards moksha, or spiritual freedom (5).

B. Basic Forms and Meanings in Hindu Temples

1. Garbhagriha: The primary Murti, or the image of a god, is kept in a basic, naked cell, within the inner sanctum known as the Garbha Griha, or womb-chamber. This chamber often features an open area that can be moved in a clockwise orientation for rituals and prayers. Around this chamber, there are often other buildings and structures, the largest of which span many acres (8).
2. Shikhara: The garbhagriha's façade is topped by a shikhara, or tower-like structure, which is also known as the vimana in the south (8).
3. The shrine construction typically has a mandapa assembly hall, an antarala antechamber and veranda between the garbhagriha and mandapa, and a circumambulatory route for parikrama.
4. Vimana: The vimana, sometimes referred to as the gopuram or shikhara, is a crucial component of Dravidian temple construction. It is the imposing, pyramid-shaped building that rises above the temple's garbhagriha, or sanctum sanctorum. Usually, vimanas are decorated with elaborate sculptures and carvings, and they frequently have several levels (8).
5. Mandapas: Mandapas, or pillared halls, are a hallmark of Dravidian temples and are utilized for a variety of activities, including as religious ceremonies, social meetings, and festivals. The mandapas are distinguished by elaborately carved ceilings and pillars that display Hindu mythological motifs (8).

6. Gopurams: Temples in the Dravidian region is renowned for their ornate gopuram entrance portals. Typically, these imposing edifices are adorned with elaborate sculptures that represent Hindu epic images, gods, goddesses, and mystical animals (8).
7. Goshtams: The gods known as goshtams are etched in niches on the garbhagriha's exterior walls. They often symbolize different facets or incarnations of the holy and are connected to the temple's principal god (8).

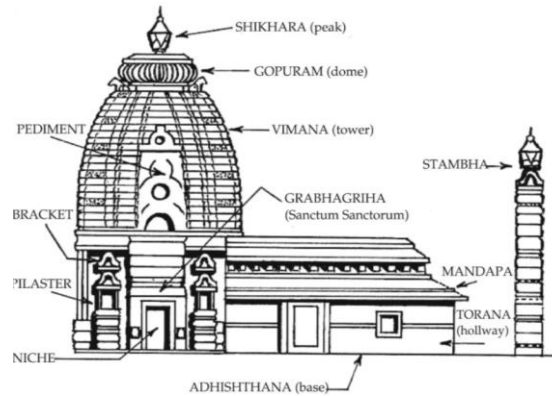


Fig 8: Symbol and Forms of Hindu Temple(elements) Kapadia, A. (n.d.). Analysis of Architectural form and elements of a Dravidian Style Temple in Chola Dynasty during Medieval Period of Southern India. In International Journal of Interdisciplinary Research and In.

C. Styles in Hindu Temple Architecture

The building of ancient temples in various regions was influenced by differences in geography, climate, racial makeup, history, and language. There are three main categories into which ancient Indian temples can be divided(9).



Fig 9: Styles of Hindu Temple Architecture Sujatavanigunasagan, by. (2002). A STUDY ON HINDU TEMPLE PLANNING, CONSTRUCTION AND THE V AASTU A Study on Hindu Temple Planning, Construction and The Vaastu.

The Dravida, Southern style, the Vesara, or Mixed style, and the Nagara, or Northern style, are the three primary architectural styles seen in temples. However, there are additionally certain regional forms from Kerala, Bengal, and the Himalayan regions.

The land between the Himalayas and the Vindhyas is linked to the Nagara style (9).

The land between the Krishna and Kaveri rivers in the Dravidian style. Occasionally, the region between the Krishna River and the Vindhyas is linked to the Vesara style (9).

Many Lord Shiva temples in India are built in the Dravidian architectural style, particularly in the southern states of Tamil Nadu, Karnataka, Andhra Pradesh, and Telangana, are constructed in the Dravidian architectural style (9).

The gopurams, or pyramidal in shape structures, pillared halls, and elaborate sculptures are features of Dravidian temple architecture.

3. Dravidian Style Architecture

Hindu temple architecture's Dravidian style first appeared in the southern region of India between 600 and 100 AD. It is mostly made up of Hindu temples, with the tall gopura, or gatehouse, being the most notable architectural element (10).

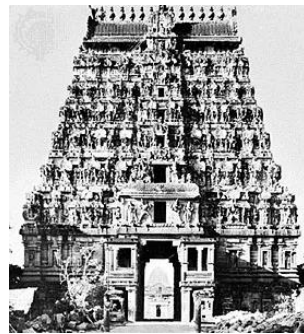


Fig 10: Temple of Peruvudaiyar Koyil Vishwakarma

This style is separated into the structural phase and the rock cut phase. However, it is believed that the earliest temples dedicated to Lord Shiva were cave temples and rock-cut shrines, some of which date back to the 6th century CE (The Classical Gupta Emperor Period). The evolution of Dravida architecture has been greatly influenced by a number of kingdoms and empires, including the Satavahanas, the Vakatakas of Vidarbha, the Cholas, the Cheras, the Kakatiyas, the Reddis, the Pandyas, the Pallavas, the Gangas, the Kadambas, the Rashtrakutas, the Chalukyas, the Hoysalas, and the Vijayanagara Empire, among others.

A. Symbolism in Dravidian Style Temples

The plan of a Dravidian temple is usually square or rectangular. In the center lies the garbhagriha, or sanctum sanctorum. The image of the god is kept in the highly sensitive area of the temple, known as the sanctum sanctorum (8). At the entrance to the garbhagriha, there will be statues depicting fierce dwarapalas guarding the temple.

Most temple complexes feature numerous halls supported by pillars. These are employed in religious activities like worship. Usually, the pillars have elaborate carvings on them. They represent exquisite Dravidian architectural design (11). The temple complex contains a sizable, open courtyard.



Fig 11: Pillar of Dravidian Style Temples

Weddings as well as other spiritual celebrations take place here. The cosmic order is symbolized by the open courtyard.

It is a location where people can congregate for celebration and worship. There are frequently aquatic features in the temple compound, including ponds or tanks. These bodies of water are used for ceremonial bathing and are symbolic of purity.

B. Design Features of Dravidian Style Temples

- Representing through Shape of the Plans such as square, rectangle, circle, elliptical.
- Statues at the entrance
- Ornamented pillars
- Open courtyards Use.
- Water around the site either natural or man-made

C. Construction Techniques

- On Rocks: During the day, the rocks were divided using wooden wedges and water to cause thermal expansion. The stones were then chipped and formed into blocks using iron tools (12).



Fig 12: Ellora Temple (rock cut temple)

- Method of Lifting Stones through the Ramp: The top level of the ramp remains the same height as the temple structure. The Team will employ traditional old technology to move the stones that need to be lifted to the plane region near the ramp (13).

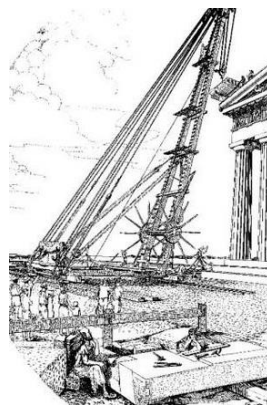


Fig 13: Lifting stones through Ramp.

- Quarrying Granites: Make a number of cuts along the stone's surface, then fill the spaces with wood and give the trees regular waterings. Wood expands and cracks along the holes as an outcome.

Means of transportation: Animals: dogs, elephants, horses, donkeys, castrated bulls, and other cattle in addition to human labor (14).

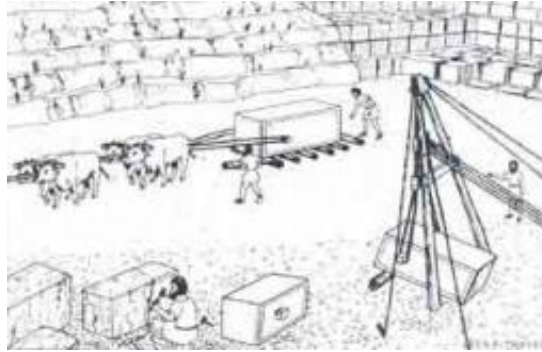


Fig 14: Using animals as a means of Transportation.

4. Case Studies

I. KAILASHNATH TEMPLE, ELLORA (15)

TEMPLE: Kailashnath Temple

LOCATION: Aurangabad, Maharashtra

TIME PERIOD: 8th Century, Rashtrakuta dynasty

AREA: 46,000 Sq m

HEIGHT: Vimana is 30 m

DEDICATED TO: Lord Shiva

ARCHITECTURAL STYLE: Dravidian Style

ARCHITECT: Architects are from South Indian Pallava Kingdom



Fig 15: Ariel View of Kailashnath Temple, Ellora, Kailasa: The Majestic Temple of Ellora. (n.d.).

INDIAN CULTURE. <https://indianculture.gov.in/stories/kailasa-majestic-temple-ellora#:~:text=The%20Kailasa%20temple%20is%20300,than%20a%20chisel%20and%20hammer>

A. Introduction

Kailashnath temple is located 30 kilometers away from the Maharashtra state of Aurangabad in the Sahyadri hills of western India. One of the biggest religious cave complexes in the world, the Ellora caves, includes the temple. A UNESCO World Heritage Site has been designated for these caverns.

The stunning Ellora caves are made up of 34 rock-cut monasteries and temples that span more than two kilometers in area. In the face of a towering basalt cliff, these temples and monasteries were excavated,

cut out, and sculpted side by side. To accommodate the three distinct religions of Buddhism, Hinduism, and Jainism, they are split into three divisions. The sixteenth temple in Ellora's chain of thirty-four sacred sites is the Kailash temple.

It appears that certain architectural features were influenced by Hindu mythological stories. Shiva is honored at the Kailashnath temple, which was built as a result of Mount Kailasha. A Shivalinga is in the sanctum sanctorum of the temple. The Siva images were positioned prominently, with the Vaishnava images serving as a complementing element. However, other Brahmanical gods like Ramayana and Mahabharat are also noted.

B. Architectural Elements

- Shrine
- Mandap
- Antarala
- Garbhagriha
- Courtyard

C. Architecture Details of Kailashnath Temple

The digging of extra chambers are located on both sides of the courtyard. Spanning 51 feet tall, there are a pair of free-standing pillars known as dhwaja-sthambhas, located on either side of the nandi shrine. Its innermost side is 106 feet deep, 160 feet broad, and 280 feet long. In the center of this pit is the temple. The Shikhar, at 96 feet, is its highest point. The main parts of Kailashnath Temple are.

- a. Entrance
- b. Shrine
- c. Mandap
- d. Grabhgriha
- e. Courtyard

a. Entrance (16)

One entrance gate (two storied) and entry from West. The entrance to the temple courtyard features a low gopuram showing Southern influence. Wall with Niches and Pilasters and Decorated with sculptures.

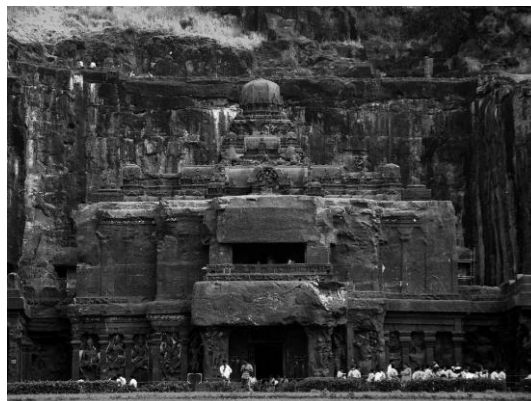


Fig 16: Entrance of Kailashnath Temple Kailasa: The Majestic Temple of Ellora. (n.d.). INDIAN CULTURE. <https://indianculture.gov.in/stories/kailasa-majestic-temple-ellora#:~:text=The%20Kailasa%20temple%20is%20300,than%20a%20chisel%20and%20hammer>

b. Nandi Shrine (17)

On a portico in front of the main temple, Nandi is seated. A rock bridge links the temple's entrance and Nandi Mandapa. Both the primary Shiva temple and the Nandi mandapa are around seven meters high. The Nandi Mandapa's lower stores are both substantial constructions with ornate, illustrative sculptures.



Fig 17: Nandi Shrine at Entrance of Mandap

Kailasa: The Majestic Temple of Ellora. (n.d.). INDIAN CULTURE. <https://indianculture.gov.in/stories/kailasa-majestic-temple-ellora#:~:text=The%20Kailasa%20temple%20is%20300,than%20a%20chisel%20and%20hammer>

c. Mandap (18)

On a portico in front of the main temple, Nandi is seated. A rock bridge links the temple's entrance and Nandi the mandap is a spacious space that is 70 feet by 62 feet. 16 square piers in groups of 4 in each quarter. Has Ardhmandapa (mukha chatushkis) on front and either side. The placement of the mahamandapa and the mukha chatushkis is close to the architectural layout of the Virupaksa temple at Pattadakal.



Fig 18: Mandap of Kailashnath Temple

Kailasa: The Majestic Temple of Ellora. (n.d.). INDIAN CULTURE. <https://indianculture.gov.in/stories/kailasa-majestic-temple-ellora#:~:text=The%20Kailasa%20temple%20is%20300,than%20a%20chisel%20and%20hammer>

d. Garbhagriha (19)

placed atop a tall pedestal carved with life-size elephants and lions, and to the east of a vimana (Pyramidical superstructure) in the Southern style. There are steps on both sides for climbing, and the Garbhagriha has a large Shivalinga and a small antarala attached to it.

The circumambulatory walk surrounding the main temple, which runs along the hillside, has five smaller shrines.

With five smaller shrines arranged along its circumambulatory road, Ellora has added a novel feature that is modeled after Pattadakal and Kanchipuram. These shrines honor the river goddesses Yamuna and Ganga.



Fig 19 : Garbhagriha of inside the temple

Kailasa: The Majestic Temple of Ellora. (n.d.). INDIAN CULTURE.

<https://indianculture.gov.in/stories/kailasa-majestic-temple-ellora#:~:text=The%20Kailasa%20temple%20is%20300,than%20a%20chisel%20and%20hammer>

e. Courtyard (20)

The courtyard is 46 meters by 82 meters in size and is somewhat elevated. A three-story tall columned arcade, or galley, borders the courtyard. Showcasing an abundance of sculptures depicting various Brahmanical deities. These galleries were connected to the main temple by stone hanging bridges, but these have now collapsed.

In the courtyard evaluating, there are two Dwajasthambams (Victory Pillars). incredibly ornate, with carvings on the cornice, windows, niches, and pilasters.



Fig 20: Central Courtyard with ornamented Pillar Kailasa: The Majestic Temple of Ellora. (n.d.).

INDIAN CULTURE. <https://indianculture.gov.in/stories/kailasa-majestic-temple-ellora#:~:text=The%20Kailasa%20temple%20is%20300,than%20a%20chisel%20and%20hammer>

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D. Planning Details(21)

The work was straightforward in the beginning. It involved digging three enormous tunnels at right angles out of the hillside and cutting them down vertically to the level of the hill's base, creating a 300 by 175-foot rectangle.

The temple's primary structure is arranged in the shape of a parallelogram that is about 150 feet by 100 feet, with portions of its sides protruding at regular points to support corresponding elements that are projected above.

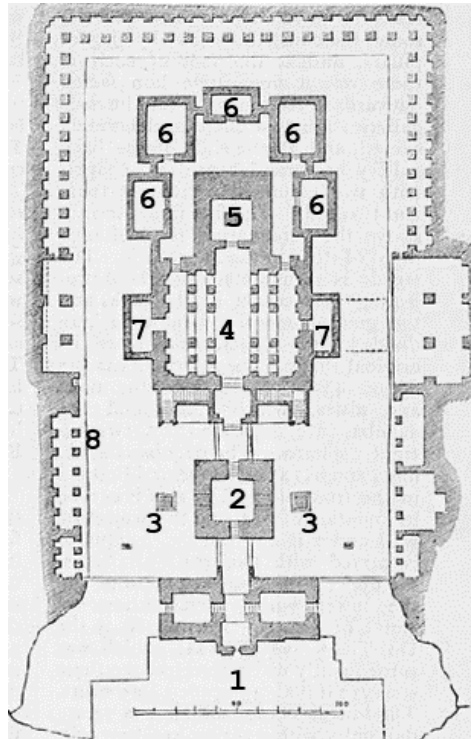


Fig 21: Plan of Kailashnath Temple, Ellora Sujatavanigunasagan, by. (2002). a study on Hindu temple planning, construction and the vastu a Study on Hindu Temple Planning, Construction and The Vaastu

Legend

1. front screen
2. nandi shrine
3. towers
4. columned hall
5. main shrine
6. subsidiary shrines
7. shrine of ablutions

E. Symbolisim in Kailashnath Temple ()

- Craved from cliff from rock-cut and sculpted side by side and it is also believed that the carving of this magnificent temple is done using simple tools like chisels and hammers.
- Followed vastu grid to enhance the planning of Kailashnath temple.

F. Balancing Concept and Structure(22)

1. Concept: It is dedicated to lord Shiva, so they made to look like Mount Kailash.

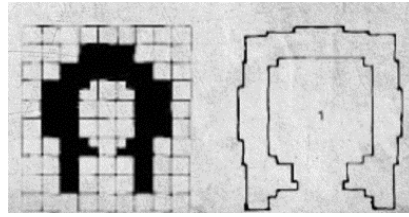


Fig 22: Grid plan of temple Govinda Krishna Pillai. (n.d.). Hindu Architecture (Vastu and Silpa Sastra) (2015th ed.). BHARATIYA KALA PRAKASHAN.

2. Structure Analysis

- The Kailashnath Temple's most remarkable aspect is fashioned out of a single piece of basalt rock, in contrast to many other temples that are constructed by combining separate stone slabs.
- The temple was molded from the pre-existing rock formation rather than built traditionally by laying foundation stones.
- The plinth practically blends in with the surrounding bedrock because the temple was carved out of a single rock mound (23). It acts as the foundation for the remaining portions of the temple's building.



Fig 23: Plinth Dokras, U. (2021). Kailash Temple. Su-se.
https://www.academia.edu/46747950/Kailash_Temple

- For the temple complex to have a sturdy base, the plinth would have been precisely carved and leveled. It offers the rising vimana (tower) the masonry support it needs.

II. BRIHADESHWARA TEMPLE, THANJAVUR (24)

LOCATION: Thanjavur, Tamil Nadu

TIME PERIOD: 1010 CE, Chola Emperor Period

AREA: 44.7 Acres

HEIGHT: Elevation 66 m

DEDICATED TO: Lord Shiva

ARCHITECTURAL STYLE: Dravidian Style

ARCHITECT: Kunjara Mallan Raja Rama Perunthachan



Fig 24: Ariel View of Brihadeshwara Temple, Thanjavur

Wikipedia contributors. (2024, May 7). Brihadisvara Temple. Wikipedia. https://en.wikipedia.org/wiki/Brihadisvara_Temple

A. Introduction

One of the biggest temples in India is the Brihadeshwara Temple in Thanjavur, which was constructed by Emperor Rajendra Chola I and finished in 1010 AD. Following his journey to Sri Lanka, the shrine was constructed by King Raja Raja Cholan. After seeing the Vedic buildings constructed by the Hindu monarchs, the king became inspired. Other names for this temple include Raja Rajeswaram, Periya Kovil, Raja Rajeswara Temple, and Peruvudaiyar Kovil. At 216 feet high, the temple tower is the highest in the entire world. Additionally, the tower's kumbam weights roughly 80 tons. More than 130,000 tons of stone were utilized in the temple's construction. Remarkably, these massive stones were transported from a location fifty kilometers distant from the temple of Brihadeshwar.

A unique feature about the temple is, it is the only temple wherein the Temple tower's (Gopuram) shadow does not appear on the ground at noon. The temple has Fortified walls that were probably added in the 16th century.

B. Architectural Elements

- Vimana
- Mandapa
- Shikara
- Gopuram

C. Architecture Details of Brihadeshwar Temple

- a. Entrance (25)
- b. Vimana (26)
- c. Mandapa (27)
- d. Shikara
- e. Sanctum Sanctorum
- f. Stone Carvings and Sculptures
- g. Frescoes and Paintings

a. Entrance (25)

It is said that the Nandi statue at the temple's entryway was carved from a single rock. This is well-known for being 12 feet tall.



Fig 25 : Main Entrance of Brihadeshwara Temple

Wikipedia contributors. (2024, May 7). Brihadisvara Temple. Wikipedia. https://en.wikipedia.org/wiki/Brihadisvara_Temple

b. Vimana (26)

In Brihadeshwara temple, the structure over the inner sanctum, or garbhagriha, is called the vimana. It is 66 meters tall and has 14 stories. It is crested by a single, roughly 80-ton granite stone. We call this monolithic cupola the Kalasham.



Fig 26 : Vimana of Brihadeshwara Temple Wikipedia contributors. (2024, May 7). Brihadisvara Temple. Wikipedia. https://en.wikipedia.org/wiki/Brihadisvara_Temple

C. Mandap (27)

The Brihadeshwara Temple has two mandapas, supported by pillars. The Maha Mandap, and mukha Mandap, is especially remarkable for the intricate carvings on it is supported by pillars



Fig 27: Mandapa Wikipedia contributors. (2024, May 7). Brihadisvara Temple. Wikipedia. https://en.wikipedia.org/wiki/Brihadisvara_Temple

d. Shikaram

The main gateways are on the east side in this temple, the gopurams are gateways. There are two intricate gopurams out of three gateways. Stone is used to make gopurams.

Marathas were built as the first gate to protect the area. Third rajarajan tiruvasal is the second gate, keralantakan tiruvasal.

e. Sanctum Sanctorum

The lingam, the primary deity of the temple and a phallic representation of Lord Shiva, is kept in the inner sanctum.

f. Stone Carvings and Sculptures (28)

Numerous stone carvings and sculptures that depict a variety of deities, heavenly creatures, mythological settings, and elaborate floral themes surround the temple.



Fig 28: Sculptures and Paintings Wikipedia contributors. (2024, May 7). Brihadisvara Temple. Wikipedia. https://en.wikipedia.org/wiki/Brihadisvara_Temple

G. Frescoes and Paintings (29)

There are still remnants of vibrant murals on the walls of the temple, even though many of the original frescoes and paintings have faded over time.

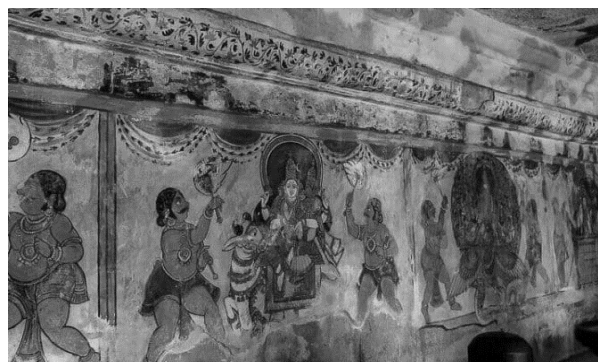


Fig 29: Paintings on the walls inside the Temple Wikipedia contributors. (2024, May 7). Brihadisvara Temple. Wikipedia. https://en.wikipedia.org/wiki/Brihadisvara_Temple

D. Planning Details(30)

The Garbhagriha is only 5 meters square, with a sturdy wall around it and a tiny passageway which has axial planning. Two hypostyle halls, a small vestibule, and a pillared veranda on the west surround the

main cellar.

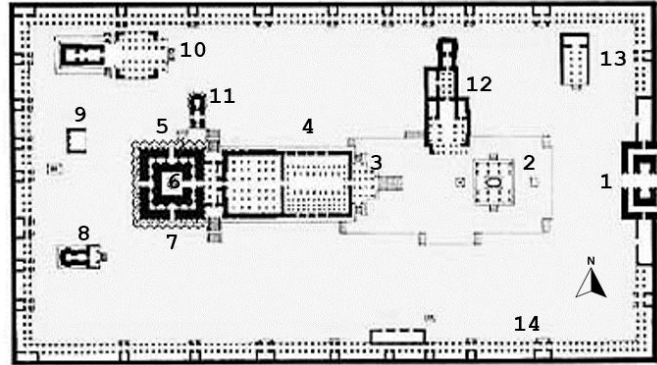


Fig 30: Plan of Brihadeshwara Temple ,Sujatavanigunasagan, by. (2002). A STUDY ON HINDU TEMPLE PLANNING, CONSTRUCTION AND THE V AASTU A Study on Hindu Temple Planning, Construction and The Vaastu

LEGEND

- | | | |
|------------------------|---------------------|----------------------|
| 1.Gopuras | 5.Antarala | 8.Gaanapati Shrine |
| 2.Nandi | 6.Garbhagriha | 9.Devi Shrine |
| 3.Entrance | 7.Pradakshina | 10.Subramanya Shrine |
| 4.Two Adjoining Mandap | 11.Chandra Shrine | |
| 12.Amann Shrine | 13. Nataraja Mandap | 14. Enclosure wall |

E. Symbolisim in Brihadeeswara Temple

- A unique feature about the temple is, it is the only temple wherein the Temple tower's (Gopuram) shadow does not appear on the ground at noon (31).



Fig 31: Gopuram of Brihadeshwara Temple Wikipedia contributors. (2024, May 7). Brihadisvara Temple. Wikipedia. https://en.wikipedia.org/wiki/Brihadisvara_Temple

- At 216 feet high, the temple tower is the highest in the entire world. It is crested by a single, roughly 80-ton granite stone.

A. Balancing Concept and Structure(22)

1. Concept: To create unique features that should not be compared with other temples which resulted in creating shadowless tower like structure (Gopuram)and elevated 216 feet high.
2. Structural Analysis:
 - A granite block plinth serves as the foundation for the Brihadeshwara Temple. The plinth functions as

- the foundation for the entire temple edifice. This foundation is necessary to disperse the weight of the large stone superstructure, particularly the temple's iconic towering vimana (main tower).
- Considering the immense scale of the temple and the weight of its stone fixtures, such as the enormous monolithic stone atop the vimana.

5. Conclusion

We finish by doing a structural study of temples using examples mostly from "south" Indian temples, based on the studies mentioned above, there are different design features which are part of elements of Hindu temple architecture. They act as a symbolism by adding some significant concepts implementing in the design which make them to play a unique and vital role in acting as an example. The basic and common concept is used from geometry and vastupurusha mandal. The balancing nature between the concept and structure is the enormous character rather than material failure, the stability of the temple structure is mostly dependent on the geometric integrity of the elements in relation to the load being applied.

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