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## The Birth of Indian Temple Architecture: A Study of the Gupta Period

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### ABSTRACT

The architectural heritage of ancient India, particularly during the Gupta Empire, marks a transformative era often called the "Golden Age" of classical India. This period saw a shift from perishable materials like wood and brick to enduring stone, enabling the crystallization of Hindu sacred architecture. Gupta temples, characterized by structured complexes with garbhagrihas, mandapas, and towering śikharas, reflected a blend of indigenous traditions, religious ideologies, and cross-cultural exchanges. Guided by texts like the *Vishnudharmottara Purana*, the formalization of temple typologies laid the foundation for later medieval styles, including Nagara and Dravida traditions. Pre-Gupta architecture, from the Indus Valley Civilization to the Mauryan and Post-Mauryan periods, set the stage for Gupta innovations. The Mauryans introduced monumental stone architecture, while the Shungas and Kushans expanded Buddhist stupas and Gandharan art. By the Gupta era, these traditions coalesced into a distinct architectural language driven by Hindu ritual, royal patronage, and technological advancements. Temples became economic powerhouses, managing land grants, funding rituals, irrigation, and welfare, while stimulating specialized labor markets and trade

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networks. Gupta architectural innovations, including five key temple typologies, profoundly influenced post-Gupta styles like Nagara and Dravida, emphasizing verticality, intricate sculpture, and regional diversity. The Gupta legacy endures in its symbolic, economic, and socio-political impact on medieval India.

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## **Introduction**

The architectural heritage of ancient India stands as a testament to the ingenuity, spiritual depth, and socio-economic complexity of its civilizations. Spanning millennia, from the urban sophistication of the Indus Valley to the imperial grandeur of the Mauryas and the artistic zenith of the Guptas, India's built environment evolved through a dynamic interplay of indigenous traditions, religious ideologies, and cross-cultural exchanges. The Gupta Empire (c. 320–550 CE), often hailed as the “Golden Age” of classical India, marked a transformative era in temple architecture, bridging the experimental forms of earlier periods with the codified styles that defined medieval India. This period witnessed the crystallization of Hindu sacred architecture, characterized by the transition from perishable materials to enduring stone, the formalization of temple typologies, and the integration of symbolic and ritualistic elements into structural design. Beyond aesthetics, Gupta temples emerged as economic powerhouses, shaping agrarian systems, trade networks, and urban development, while reinforcing the symbiotic relationship between religious patronage and political authority. The pre-Gupta architectural landscape laid the groundwork for these innovations. The Indus Valley Civilization (c. 3300–1300 BCE) demonstrated early urban planning with grid-patterned cities and advanced drainage systems, while its terracotta figurines hinted at proto-Hindu iconography. The Mauryan Empire (c. 321–185 BCE) introduced monumental stone architecture, exemplified by Ashoka's polished pillars and rock-cut caves, blending Buddhist symbolism with imperial authority. Post-Mauryan dynasties, such as the Shungas and Kushans, expanded this legacy through grand stupas like Sanchi and hybrid Gandharan art, synthesizing Hellenistic realism with Indian spirituality. By the Gupta period, these diverse traditions coalesced into a distinct architectural language, driven by the imperatives of Hindu ritual, royal patronage, and technological advancement. Central to Gupta innovation was the shift from wood and brick to stone—a material choice that ensured permanence and enabled intricate sculptural expression. Temples transitioned from modest, flat-roofed shrines to structured complexes featuring garbhagrihas (sanctums),



mandapas (pillared halls), and towering śikharas (spires). Texts like the Vishnudharmottara Purana codified principles of vastu shastra, guiding proportional systems and symbolic alignments. The Gupta era saw the emergence of five key temple typologies: square flat-roofed temples, square temples with covered ambulatories, rectangular barrel-vaulted shrines, square temples with curvilinear śikharas, and circular/octagonal temples. Each type reflected distinct ritual needs, regional influences, and evolving theological concepts. For instance, the Dashavatara Temple at Deogarh pioneered the śikhara form, symbolizing Mount Meru as the cosmic axis, while the Bhitargaon Temple showcased brick engineering adapted to sacred geometry. Economically, temple construction stimulated specialized labor markets, fostering guilds of artisans, masons, and sculptors. Temples became nuclei of urbanization, attracting pilgrims and traders along routes like the *uttarāpatha* (Grand Trunk Road). Land grants (*devadana*), often tax-exempt, transformed temples into agrarian managers, controlling vast estates and redistributing surplus to fund rituals, irrigation projects, and community welfare. This model institutionalized temples as centers of economic power, a legacy perpetuated by post-Gupta dynasties like the Cholas and Pratiharas.

## Literature Review

The Gupta period was a transformative era in Indian history, particularly in the development of temple architecture. The political stability under rulers such as Chandragupta I, Samudragupta, and Chandragupta II fostered economic prosperity and religious patronage, enabling large-scale temple construction. Scholars like Mookerji (2017) highlight the Gupta rulers' encouragement of both Brahmanical and heterodox traditions, as evident in inscriptions and coinage reflecting royal support for temples dedicated to Vishnu, Shiva, and Shakti. This period also witnessed significant religious and cultural syncretism, with Puranic Hinduism integrating Vedic traditions and localized folk practices. Shrimali (1988) argues that temple architecture became a medium for expressing this synthesis, while Bakker (2010) emphasizes the coexistence of Hindu, Buddhist, and Jain architectural traditions within the Gupta-Vākāṭaka cultural sphere. Notable examples include the Dashavatara Temple at Deogarh and Buddhist stupas at Sanchi.

Architecturally, the Gupta period laid the foundation for the *Nagara* (North Indian) and *Dravida* (South Indian) styles. Gupta (2004) identifies structural innovations such as the *shikhara* (tower), *garbhagriha* (sanctum), and *mandapa* (pillared hall), which later became defining features of Indian temples. The transition from timber and brick to stone construction, as seen in the Bhitargaon and Tigawa temples, marked a significant technological advancement (Ahuja, 2018). Decorative elements like terracotta



reliefs, studied by Agrawala (1985), reflect a blend of folk and elite artistic traditions. Symbolically, temple architecture mirrored cosmological and theological concepts, with sculptural programs depicting Puranic narratives serving as religious tools (Kossak, 1994).

Debates persist regarding the Gupta period's role as a "prototype" for later medieval architecture. Bakker (2010) challenges the notion of a linear evolution, suggesting that regional dynasties contributed independently, while Asher (1980) argues for Gupta influence on Chalukyan and Pallavan temple designs. Despite significant research, gaps remain in the study of rural temples and artisan guilds. Comparative studies with early Southeast Asian architecture could provide further insights into the Gupta legacy. Ultimately, the period's architectural advancements, religious pluralism, and artistic innovations established the foundation for later Hindu temple traditions.

### **Objective and Methodology**

This study examines the architectural innovations of the Gupta Empire, the "Golden Age" of classical India, focusing on how temple architecture evolved as a transformative force in Indian history. It explores the transition from perishable materials like wood and brick to enduring stone, a shift that solidified Hindu sacred architecture's physical and symbolic permanence. By analyzing the formalization of temple typologies—such as square flat-roofed shrines, curvilinear śikharas, and circular/octagonal designs—the research highlights the integration of ritualistic elements (e.g., garbhagriha, mandapa) and cosmological symbolism (e.g., śikhara as Mount Meru). It contextualizes Gupta innovations within pre-Gupta traditions, tracing continuity from the Indus Valley's urban planning, Mauryan stone pillars, and Post-Mauryan hybrid art (e.g., Gandharan stupas). The study also investigates the socio-economic role of temples, which functioned as economic hubs through land grants (devadana), agrarian management, and trade networks, fostering urbanization and specialized labor guilds. Additionally, it assesses the Gupta legacy in post-Gupta architecture, particularly the emergence of Nagara (North India) and Dravida (South India) styles by the 8th century. By tracing the evolution from terraced brick temples to towering stone complexes, the research underscores how Gupta principles—spatial organization, symbolic elevation, and ritual function—shaped medieval India's architectural identity. Ultimately, the study positions Gupta temple architecture as a bridge between ancient experimentalism and medieval codification, emphasizing its enduring cultural, religious, and socio-political influence.

The architectural innovations of the Gupta Empire involve a multidisciplinary approach, combining historical analysis, architectural examination, and socio-economic contextualization. Primary sources, including archaeological findings, inscriptions, and textual references from the Gupta period, such as the



Vishnudharmottara Purana and Brihat Samhita, are analyzed to understand the principles of vastu shastra and the formalization of temple typologies. Secondary sources, including scholarly works on Indian art and architecture, provide critical insights into the evolution of temple design and its socio-economic implications. The study also incorporates comparative analysis of pre-Gupta and post-Gupta architectural styles to trace the continuity and transformation of temple architecture. Field visits to key Gupta-era temple sites, such as the Dashavatara Temple at Deogarh and the Bhitargaon Temple, are conducted to document architectural features, materials, and construction techniques. Photographic documentation and detailed descriptions of structural elements, such as garbhagrihas, mandapas, and śikharas, are used to illustrate the transition from perishable materials to enduring stone. The study also examines the economic impact of temple construction, focusing on land grants (devadana), labor markets, and the role of temples in urbanization and trade. By integrating historical, architectural, and socio-economic perspectives, this research aims to provide a comprehensive understanding of the Gupta period's architectural legacy and its enduring influence on Indian temple architecture.

### **Pre-Gupta Architectural Context**

The architectural and artistic developments of ancient India before the Gupta period reveal a rich tapestry of cultural, religious, and technological innovation. This era, spanning the Indus Valley Civilization, the Mauryan Empire, and the subsequent Post-Mauryan dynasties, laid the groundwork for the iconic styles that would later flourish under the Guptas. The interplay of indigenous traditions and external influences, coupled with the rise of major religions, shaped a diverse architectural landscape characterized by monumental pillars, rock-cut caves, stupas, and early temple forms. The artifacts and textual references from the Ashmolean Catalogue provide critical insights into these developments, highlighting the continuity and evolution of architectural practices across millennia. The Indus Valley Civilization (c. 3300–1300 BCE) represents one of the earliest examples of urban planning in South Asia. Sites like Mohenjodaro and Harappa exhibit advanced engineering, with grid-patterned streets, standardized brick sizes, and sophisticated drainage systems. The "Great Bath" at Mohenjodaro, a large water tank lined with bitumen, suggests ritualistic or communal functions, hinting at early religious architecture. While few large-scale religious structures survive, terracotta figurines and seals depicting deities, such as the "Proto-Shiva" figure seated in a yogic posture, indicate a symbolic vocabulary that may have influenced later Hindu iconography. The Ashmolean's collection of Indus Valley artifacts, including steatite seals and pottery sherds from Sir Aurel Stein's expeditions, underscores the



civilization's trade networks and artistic conventions, which persisted into later periods. The Mauryan period (c. 321–185 BCE) marked a significant shift toward monumental stone architecture. Emperor Ashoka's reign saw the erection of freestanding pillars, such as the Lion Capital at Sarnath, which combined political propaganda with religious symbolism. These pillars, carved from Chunar sandstone and polished to a lustrous finish, featured animal motifs like lions, elephants, and bulls, representing both imperial authority and Buddhist ideals. The pillars' inscriptions in Brahmi and Kharoshthi scripts disseminated Ashoka's edicts, blending governance with moral teachings. Rock-cut caves, such as those at Barabar and Nagarjuni hills, further exemplified Mauryan innovation. These caves, dedicated to ascetic communities, featured meticulously polished interiors and arched doorways, setting precedents for later Buddhist chaityas. The Ashmolean's coping stone fragments from Mathura, inscribed with references to King Suryamitra, illustrate the era's emphasis on commemorative architecture and royal patronage.

Post-Mauryan dynasties, including the Shungas, Satavahanas, and Kushans, expanded upon these foundations. The Great Stupa at Sanchi, enlarged under the Shungas, became a focal point of Buddhist architecture. Its toranas (gateways), adorned with reliefs depicting Jataka tales and yakshi figures, synthesized narrative art with structural design. The Yakshi sculptures, such as the iconic figure from Didarganj, exemplified the integration of fertility symbolism into religious sites. Meanwhile, the Kushan period saw the rise of Mathura and Gandhara as artistic hubs. Mathura's red sandstone sculptures, including early representations of Vishnu and Shiva, reflected the growing importance of Hindu iconography. Gandhara, influenced by Hellenistic and Persian aesthetics, produced hybrid Buddha images blending Greco-Roman realism with Indian spiritual ideals, as seen in the Ashmolean's schist reliefs. Religious diversity drove architectural experimentation. Buddhist viharas (monasteries) and chaityas (prayer halls), such as those at Karle and Ajanta, incorporated pillared halls and stupa shrines. The Ashmolean's inscribed tablets from Gopulpur, dating to the Gupta period but rooted in earlier traditions, highlight the ritualistic use of stupas for housing relics and sacred texts. Jain architecture, though less prominent, featured intricately carved pillars and toranas, as evidenced by fragments from Kankali Tila. Early Hindu temples, such as the brick-and-timber structures at Vidisha, laid the groundwork for the Nagara and Dravida styles, though few survive intact. Materials and techniques evolved alongside ideological shifts. The Mauryans' adoption of stone replaced perishable wood and brick, while the Post-Mauryan period saw advancements in terracotta molding, exemplified by plaques from Chandraketugarh depicting deities like Durga. Bronze casting, though rare, produced portable



Buddhist icons, such as the Ashmolean's 6th-century Buddha, which disseminated artistic styles across trade routes. Inscriptions, such as those on the Gopalpur tablets, reveal the role of written language in sanctifying architectural spaces. Cultural syncretism further enriched Pre-Gupta architecture. The Northwest's Gandhara region absorbed Hellenistic elements, as seen in the Alexander Gem's tourmaline seal, merging Greek portraiture with Indian motifs. Indo-Greek coins and Kushan sculptures reflected cross-cultural exchanges, while the Mitra dynasty's art blended Vedic and local traditions.

### **Gupta Innovations: Materials and Structural Techniques**

The Gupta era marked a watershed moment in South Asian architecture, characterized by the widespread adoption of stone as a primary building material and the systematic formalization of Hindu temple plans. While earlier periods, such as the Mauryan and Post-Mauryan eras, had demonstrated remarkable sophistication in wood, brick, and terracotta architecture, these materials' perishable nature left few surviving structures. The Gupta shift to stone not only ensured the longevity of their architectural achievements but also enabled the codification of design principles that became foundational to Hindu sacred architecture. This revolution was driven by technological innovation, religious imperatives, and the socio-political consolidation of Hindu identity under Gupta patronage. Before the Gupta period, Indian architecture relied heavily on timber, bamboo, and baked brick—materials that were abundant and versatile but vulnerable to decay, fire, and environmental erosion. The Mauryan Empire, for instance, had pioneered advanced urban planning, as seen in cities like Pataliputra, which featured wooden palisades and pillared halls described by Greek ambassador Megasthenes. Similarly, the Post-Mauryan Shunga dynasty expanded Buddhist stupas like Sanchi using brick and wood for their iconic toranas (gateways). However, these materials' ephemerality meant that few pre-Gupta structures survived beyond their immediate cultural context. The Gupta adoption of stone addressed this limitation, prioritizing permanence to reflect the divine and eternal nature of Hindu cosmology. Sandstone, granite, and chlorite schist became favored mediums, quarried from sites like Chunar and Mathura, which had already been exploited for Ashokan pillars and sculptures. Stone's durability allowed architects to experiment with intricate carvings, structural complexity, and monumental scale, setting a precedent for future dynasties.

The Gupta period saw the crystallization of Hindu temple architecture into standardized forms, guided by emerging religious texts such as the Vishnudharmottara Purana and Brihat Samhita, which outlined principles of vastu shastra (architectural science). Temples transitioned from modest, flat-roofed shrines



to structured complexes with distinct components: the garbhagriha (sanctum), mandapa (pillared hall), antarala (vestibule), and shikhara (towering spire). This formalization reflected Hinduism's growing ritual complexity, as temples became focal points for puja (worship), requiring spaces for circumambulation, offerings, and congregational gatherings. The Dashavatara Temple at Deogarh exemplifies this evolution. Its square sanctum houses a Vishnu relief, while the pyramidal shikhara, adorned with chaitya (arch-shaped) motifs, symbolizes Mount Meru, the cosmic axis. The temple's raised platform (jagati) and sculpted panels depicting Vishnu's avatars underscore the integration of narrative art with sacred geometry. Similarly, the brick Bhitargaon Temple features a towering shikhara and terracotta reliefs of deities, demonstrating how Gupta architects adapted earlier terracotta techniques to stone and brick contexts. These structures codified the Nagara style, characterized by curvilinear spires, which later diverged into regional sub-styles across North India. The Gupta mastery of stone enabled unprecedented artistic expression. Sculptors employed advanced techniques such as relief carving, in-the-round modeling, and polychromy to adorn temples with deities, mythological scenes, and auspicious symbols. The Udayagiri Caves (c. 4th–5th century CE), for instance, blend rock-cut architecture with sculptural grandeur, housing a monumental Varaha (boar) incarnation of Vishnu rescuing the earth goddess. The precision of these carvings—evident in the delicate drapery of figures and the rhythmic flow of compositions—reflects a synergy between religious symbolism and technical skill. The Guptas refined structural engineering. Corbeled arches and cantilevered beams allowed for wider spans and taller spires, as seen in the Mahabodhi Temple at Bodh Gaya (rebuilt c. 5th century CE), whose elongated shikhara became a prototype for later Buddhist and Hindu towers. The use of iron clamps and dowels, noted in the Ashmolean's analysis of Gupta-period bronzes (Page 27), further stabilized stone assemblies, ensuring longevity.

### **Architectural features**

The architectural achievements of the Gupta period represent a pivotal era in the evolution of sacred structures in the Indian subcontinent, marked by innovation in materials, form, and symbolic expression. This period witnessed the construction of both Buddhist and Hindu monuments, with a notable shift toward monumental stone temples alongside the continued use of brick, reflecting a synthesis of indigenous traditions and emerging stylistic preferences. Gupta architecture is characterized by its experimentation with terraced platforms, intricate decorative elements, and the integration of religious symbolism, all of which laid the groundwork for later classical temple styles. The period's architectural





legacy is evident in surviving structures such as the Viṣṇu temple at Aṃṣāḍ, the terraced monuments at Ahichhatrā and Pawāyā, and the Buddhist stūpas of Kesariyā and Nālandā, each exemplifying the technical and artistic sophistication of the era.

One of the defining features of Gupta architecture was the use of stepped pyramidal bases, a form initially popularized in Buddhist stūpas but later adapted by Hindu builders. These terraced platforms, constructed using the “boxing technique” of brick walls filled with compacted debris, were designed to elevate sacred structures, symbolizing both spiritual ascent and royal authority. The Viṣṇu temple at Aṃṣāḍ, for instance, featured five rectangular terraces with niches adorned with stucco plaques depicting scenes from the Rāmāyana, illustrating the narrative and devotional focus of Hindu monuments. Similarly, the triple-tiered brick temple at Pawāyā, expanded during the Gupta period, showcased pilasters, roll cornices, and candraśālā mouldings, reflecting a blend of structural grandeur and ornamental detail. These terraced forms, as noted by Heinrich Gerhard Franz, likely originated in Buddhist architectural traditions but were repurposed by Hindus to assert their religious and political presence in landscapes dominated by Buddhist monuments.

The Gupta era also saw advancements in stone architecture, with early structural stone temples emerging alongside brick counterparts. These stone temples, though modest in scale compared to later medieval constructions, featured dark, confined sanctums reminiscent of cave temples, emphasizing intimacy and mystery in worship. The integration of stone allowed for greater durability, particularly in regions like Gandhāra, where Kuṣāṇa-era stūpas with multi-tiered stone bases had already demonstrated the material’s resilience. However, brick remained a favored medium in the Gangetic plains, where monumental terraced structures such as the Śiva temples at Ahichhatrā were built using cellular plans filled with earth and rubble. These brick platforms, often enlarged over centuries, exemplified the Gupta preference for solidity and verticality. The Ahichhatrā complex, with its four terraces crowned by a sanctum and adorned with terracotta reliefs of Śiva, highlights the interplay between structural innovation and iconographic richness. Decorative elements in Gupta architecture were deeply symbolic, blending aesthetic and religious motifs. The niches of the Aṃṣāḍ temple, for example, alternated between rectangular and keyhole shapes, framing stucco panels that narrated epic tales, while the Lakṣmīndarer Medh in Bangladesh featured a gold leaf depicting a recumbent bull, likely a foundation deposit for a Śiva shrine. Such details underscored the Gupta artisans’ skill in merging narrative art with architectural form. The use of terracotta plaques, as seen at Pawāyā and Ahichhatrā, further demonstrated the period’s artistic versatility, depicting deities like Durgā, Brahmā, and Viṣṇu’s avatars



in dynamic compositions. These decorative schemes not only enhanced the monuments' visual appeal but also reinforced their sacred function, transforming architectural surfaces into canvases for divine storytelling.

The dissemination of Gupta architectural styles was facilitated by major trade routes such as the *uttarāpatha* (Grand Trunk Road), which connected Gandhāra to the Gangetic plains and beyond. This network enabled the spread of terraced forms to regions like Maināmatī in Bangladesh, where the Sālban Vihāra and Kotilā Murā stūpas incorporated multi-tiered bases. The interplay between regional styles is evident in the reliefs from Garḥwā and Sanghol, which depict towering stūpas with narrow, pillar-like terraces, suggesting a familiarity with Gandhāran prototypes. Additionally, the Gupta period saw the assimilation of foreign influences, as seen in the star-shaped stūpa at Rawak in Khotan, Central Asia, which featured staircases aligned to the cardinal directions and colossal stucco Buddhas, reflecting the Silk Road's role in transmitting architectural ideas. Religious competition between Hindus and Buddhists also shaped Gupta architecture. At Śrāvastī, the conversion of the Kacchi Kuṭī stūpa into a Hindu temple adorned with Rāmāyaṇa panels during the Gupta period exemplifies efforts to visually assert Hindu dominance in historically Buddhist spaces. Similarly, the construction of Śiva temples on elevated terraces at Ahichhatrā and Mansar—strategically positioned at the heart of fortified cities—underscored the political and spiritual aspirations of Hindu patrons. These monuments, often built atop earlier Buddhist ruins, symbolized a deliberate reclamation of sacred geography, blending architectural grandeur with ideological intent. Despite their innovation, Gupta-era terraced structures gradually declined as stone temple architecture flourished under the Nāgara and Drāvida styles by the 8th century. The monumental Kailāsanātha temple at Ellorā, carved from a single rock, marked a departure from brick-based pyramidal forms, emphasizing instead intricate sculptural programs and vertical śikharas. Yet the Gupta legacy endured in Southeast Asia, where monuments like Baksei Chamkrong in Angkor echoed the terraced prototypes of Ahichhatrā and Pawāyā, albeit in simplified forms.

#### Various type of Gupta Temple Architecture

The Gupta Empire marked a golden age in Indian art and architecture, laying the foundation for classical Hindu temple design. During this period, temple architecture transitioned from rock-cut cave shrines and wooden prototypes to freestanding stone structures, establishing typologies that influenced subsequent traditions. Adam Hardy's analysis of Indian temple typologies, as outlined in *Glimpses of Indian History and Art*, provides insights into the architectural innovations of the Gupta era. Here, we



explore the five key varieties of Gupta temple architecture, contextualizing their forms, evolution, and significance.

## 1. Square Flat-Roofed Temples with a Shallow Mandapa

The square flat-roofed temple represents the earliest and most simplistic form of Gupta temple architecture. These temples are characterized by their square sanctum (garbhagriha), which housed the main deity. The sanctum was enclosed within thick stone walls and featured a flat roof, an architectural choice that provided structural stability. A distinctive feature of these temples was the shallow pillared porch (mandapa) at the entrance, which, although modest in scale, introduced the idea of a transitional space between the sacred inner sanctum and the secular world outside. This transition became a fundamental design principle in later Hindu temple architecture. Another significant architectural element was the āmalaka, a ribbed disc placed atop the sanctum's roof, serving as a precursor to the more elaborate śikhara (tower) that would become prominent in later periods. Before the Gupta era, religious shrines were primarily rock-cut caves, such as Buddhist chaityas, or wooden structures that lacked permanence. The Gupta shift towards stone masonry marked a significant advancement, ensuring durability and allowing for more intricate carvings and sculptural embellishments. Two notable examples that exhibit this shift are the Sanchi Temple in Madhya Pradesh and the Bhitargaon Temple in Uttar Pradesh. The Sanchi Temple, constructed in sandstone, features a square sanctum with a flat roof supported by four robust pillars, embodying geometric simplicity. Bhitargaon Temple, primarily built with brick, is notable for its terracotta ornamentation, which blended indigenous artistic techniques with the evolving Gupta aesthetic.

These early temples had profound implications for the development of Hindu religious practices and temple construction techniques. The introduction of the mandapa set the stage for more elaborate pillared halls in later periods, accommodating congregational worship and expanding ritualistic functions. The square plan of these temples symbolized the cosmic order, aligning with the Vastu Purusha Mandala, a fundamental concept in Hindu architectural cosmology. Economically, temple construction fostered specialized guilds of masons and sculptors, stimulating local economies. Many temples were supported by land grants (devadana), which ensured their sustainability as religious, agrarian, and cultural centers. The legacy of these early temples is evident in the evolution of the Nagara style, where the simple square plan developed into multi-tiered śikharas, influencing medieval Indian



and even Southeast Asian temple architecture, as seen in Cambodia's early brick shrines.

## 2. Square Temples with a Covered Ambulatory

A significant advancement in Gupta temple architecture was the introduction of a covered circumambulatory passage (*pradakṣiṇāpatha*) around the sanctum. This feature allowed devotees to engage in the ritual practice of circumambulation, reinforcing a meditative and devotional experience. A peripheral wall enclosed the ambulatory, often adorned with sculpted panels that depicted scenes from Hindu mythology, making the temple not only a place of worship but also an artistic and educational space. The temple's flat or slightly sloped roof was supported by corbelled stonework or a series of pillars, demonstrating evolving construction techniques. This architectural feature was inspired by Buddhist chaitya halls but was adapted to meet Hindu ritualistic needs. The Parvati Temple at Nachna Kuthara (5th century CE) and the Dashavatara Temple at Deogarh (6th century CE) exemplify this style. The Parvati Temple is particularly noteworthy for its ambulatory adorned with intricately carved panels depicting Shiva's exploits, while the Dashavatara Temple showcases relief sculptures illustrating the ten incarnations (*Dashavatara*) of Vishnu. These sculptural narratives played a crucial role in popularizing religious stories among devotees who may not have been literate, making temples a medium for disseminating theological and philosophical ideas.

The covered ambulatory had multiple significant implications. From a ritualistic perspective, it enhanced devotional practices by merging movement with meditative worship, reinforcing the act of circumambulation as an essential part of Hindu temple rituals. Artistically, the walls of the ambulatory became canvases for elaborate mythological narratives, setting a precedent for the integration of sculpture and architecture that would flourish in later medieval temples, such as the Kandariya Mahadeva Temple in Khajuraho. Structurally, the addition of ambulatories represented an increasing complexity in temple design, paving the way for the grander, multi-story temple galleries seen in subsequent centuries. The legacy of this style extended beyond Hindu temples, influencing Jain and Buddhist architectural traditions, where sacred movement and circumambulatory paths became central elements in their religious structures. Rectangular Temples with a Barrel-Vaulted Roof (*Valabhi Mode*)

The Valabhi mode of Gupta temple architecture introduced an elongated rectangular plan topped with a barrel-vaulted roof (*śālā*), a design inspired by wooden prototypes and Buddhist chaitya halls. This



architectural style is characterized by its distinctive horseshoe-shaped dormer windows (*gavākṣas*), which allowed natural light and ventilation into the sanctum while maintaining the structural integrity of the vaulted roof. One of the most prominent examples of this architectural form is the Teli-ka-Mandir in Gwalior, dating to the 8th century CE. Although a post-Gupta structure, it preserves Valabhi elements such as the vaulted roof and an intricately sculpted façade depicting river goddesses Ganga and Yamuna, reflecting the artistic and structural experimentation of the Gupta period. This form was particularly associated with goddess worship, as seen in temples dedicated to Durga and Chamunda, where the imposing barrel vault created a sense of grandeur and divine presence. The significance of the Valabhi mode lies in its religious and regional adaptations. The incorporation of Buddhist vaulted roofs into Hindu temples reflects the syncretism of the Gupta era, wherein architectural styles transcended religious boundaries. Regionally, this form evolved into the Khakhara deul style in Odisha, where it was primarily used for tantric goddess temples, demonstrating how Gupta innovations influenced medieval temple architecture. The barrel-vaulted design also had a lasting impact on temple architecture in Central India and Odisha, bridging the stylistic gap between Gupta-era experimentation and medieval regional temple forms.

### 3. Square Temples with a Śikhara (Curvilinear Tower)

One of the most transformative developments in Gupta temple architecture was the introduction of the śikhara, a curvilinear spire that became the defining feature of the Nagara style. The śikhara symbolized Mount Meru, the cosmic axis in Hindu cosmology, representing the spiritual ascent towards divine realms. Structurally, the tower was segmented into horizontal bands (*bhūmis*), culminating in an *āmalaka* and *kalaśa* (finial), enhancing both aesthetic appeal and symbolic meaning. The Dashavatara Temple at Deogarh (6th century CE) is an early example of this architectural style, featuring a pyramidal śikhara adorned with *gavākṣas*, which provided both structural support and decorative finesse. The Mahabodhi Temple in Bodh Gaya, though primarily a Buddhist monument, incorporated Gupta-era śikhara elements during its 6th-century reconstruction, underscoring the widespread influence of this design. The śikhara revolutionized temple architecture by transforming temples into cosmic microcosms. Its verticality emphasized divine ascent, reinforcing theological concepts through architectural form. The technical mastery involved in constructing these towering structures, including corbelled arches and iron clamps, enabled greater stability and monumental scale. The legacy of the śikhara is evident in medieval temple architecture, influencing masterpieces like the temples of Khajuraho and the grand Lingaraja Temple in Odisha.



#### 4. Circular and Octagonal Temples

Though rare, circular and octagonal temples showcased the Gupta architects' willingness to experiment with unconventional geometries. These temples often featured domed roofs, adding to their unique aesthetic appeal. Notable examples include the Maniyar Math Shrine in Rajgir and the Mundeshwari Temple in Bihar, both of which reflect a blend of indigenous design principles and sophisticated Gupta-era stone masonry.

The Maniyar Math Shrine, dedicated to serpent (nāga) worship, has a cylindrical sanctum with stucco reliefs. The Mundeshwari Temple's octagonal plan, possibly dating to the Gupta era, exhibits a fusion of Shiva-Shakti worship, indicative of the period's religious syncretism. These experimental forms challenged conventional rectilinear temple designs, demonstrating the Gupta architects' ingenuity. They also integrated folk traditions, such as nāga worship, into mainstream Hindu temple architecture. The influence of circular and octagonal temple designs extended into later tantric and regional temples, such as the Martand Sun Temple in Kashmir, further enriching India's architectural heritage.

#### Influence on Post-Gupta Architecture

The architectural legacy of the Gupta period (4th–6th centuries CE) profoundly influenced the evolution of post-Gupta temple styles, particularly the Nāgara and Drāvida traditions, which emerged as dominant forms across North and South India by the 8th century. While the Gupta era is known for its terraced brick and stone temples, the transition to post-Gupta architecture marked a shift toward verticality, intricate sculptural programs, and regional stylistic diversification. The Nāgara style, with its towering śikhara (spire), and the Drāvida style, distinguished by its pyramidal vimāna (tower), both built upon Gupta innovations in materials, symbolic ornamentation, and spatial organization. These advancements, facilitated by trade routes and religious patronage, laid the foundation for the classical temple architecture of medieval India. The Gupta period's experimentation with brick and stone construction provided the technical foundation for post-Gupta styles. Temples such as the Viṣṇu temple at Aphṣād and the Śiva temples at Ahichhatrā showcased early structural innovations, using brick cores for solidity. However, the shift toward stone construction in the post-Gupta era, evident in the monumental Kailāsanātha temple at Ellorā (c. 750–800 CE), reflects a broader trend toward durability and grandeur. The Nāgara style retained the Gupta emphasis on symbolic elevation but reimagined it through curvilinear śikharas representing Mount Meru, the cosmic axis. Similarly, the Drāvida style adapted Gupta-era stepped platforms into multi-tiered vimānas, incorporating finely proportioned sculptural



niches and axial symmetry, as seen in the Pallava- era Shore Temple at Mahabalipuram.

The Nāgara style's evolution was deeply influenced by Gupta-era spatial symbolism and ritual function. Gupta texts like the *Visnudharmottarapurāṇa* conceptualized temple platforms as metaphysical representations of *tamas*, *rajas*, and *sattva* (the three *guṇas*), a principle mirrored in tiered temple bases. Post-Gupta temples translated this symbolism into vertical forms, with the *śikhara* embodying spiritual ascension. The Gupta practice of situating temples along trade routes, such as the *uttarāpatha* (Grand Trunk Road), enabled the Nāgara style's spread across Khajuraho, Bhubaneswar, and Rajasthan. Meanwhile, the Drāvida style retained Gupta influences in enclosed courtyards and monumental gateways (*gopurams*), evolving into large- scale temple complexes under the Pallavas and Cholas. The decline of Gupta terraced temples and the rise of Nāgara and Drāvida styles were also shaped by shifting religious and political dynamics. Gupta-era temples often asserted Śaiva or Vaiṣṇava dominance in former Buddhist centers, a competitive ethos that persisted into the post-Gupta era. By the 8th century, the symbolic power of towering stone temples had surpassed terraced forms, with the Chandellas, Pratiharas, Pallavas, and Cholas using monumental temples to assert political legitimacy. The enduring Gupta legacy is evident in both styles' ritual structures—the *garbhagr̥ha* (sanctum) remained a sacred womb-like chamber, while circumambulatory paths (*pradakṣiṇā*) evolved into pillared *maṇḍapas*, reinforcing temples as centers of communal worship and economic power.

### **Economic Influence**

The Gupta Empire marked a transformative period in Indian history, characterized by advancements in temple architecture and economic structures. The evolution of temple architecture, particularly the Nāgara style with its curvilinear *shikhara*, not only influenced religious practices but also had profound economic implications. Temple construction stimulated employment, urbanization, and trade, while land grants institutionalized temples as key agrarian and financial hubs, shaping medieval India's socio-economic landscape.

The construction of Gupta temples created extensive employment opportunities, engaging architects, sculptors, masons, and painters. The demand for specialized labor led to the formation of guilds, such as those of *shilpīns* (artisans) and *sthapathīs*, which played a crucial role in the structured labor market. The large-scale procurement of materials like sandstone, granite, and metals boosted the quarrying, transportation, and metallurgy industries. Temples also stimulated long-term employment, as artisans



continued to maintain and renovate temple structures, integrating temple construction into regional economies. Beyond religious purposes, temples became focal points of urbanization and trade. Located along major trade routes, temple towns attracted pilgrims, traders, and settlers, leading to the development of mandapikas. Merchants supplied goods like textiles and metals, fostering long-distance trade. Temples also served as warehouses, storing surplus grains and valuables, thereby reinforcing economic stability and encouraging permanent settlements around them.

Temples played a significant role in cultural patronage and political legitimacy. Gupta rulers, such as Samudragupta, patronized temple construction to assert their divine authority. Kings and elite patrons contributed large endowments to temples, creating a cycle of wealth accumulation. These temples reinvested resources into community welfare, including irrigation projects and food distribution. This model continued into later periods, as seen in the Tirupati Temple, which financed agricultural projects to sustain local economies. A key aspect of temple economies was land grants (devadana), which ensured temple sustenance. These tax-exempt (sarvamanya) grants provided temples with steady revenue. Different types of grants, such as crown lands, brahmadeya (lands given to Brahmins), and military service tenures, reinforced temple power. Inscriptions like the Aihole inscription of Pulakeshin II highlight the continuation of Gupta land policies. Temples managed agricultural lands, collecting taxes (raksabhoga) and redistributing wealth to fund infrastructure and religious activities. During times of crisis, such as famines and political upheavals, temples acted as centers of relief, offering economic stability. The economic model established by the Guptas persisted under later rulers like the Cholas and Vijayanagara kings, where temples controlled land, trade, and artisan guilds.

## Findings

The Gupta Empire (c. 320–550 CE) marked a transformative phase in Indian temple architecture, characterized by the transition from perishable materials like wood and brick to enduring stone, enabling the crystallization of Hindu sacred architecture. This shift ensured structural permanence and allowed for intricate sculptural expression, exemplified by temples such as the Dashavatara Temple at Deogarh and the Bhitargaon brick temple. Gupta innovations formalized temple typologies into five key forms: square flat-roofed shrines, square temples with ambulatories, rectangular barrel-vaulted structures, curvilinear śikhara-topped temples, and circular/octagonal shrines. These designs, codified in texts like the Vishnudharmottara Purana, blended indigenous traditions with emerging Hindu ritual needs, laying the foundation for later Nagara and Dravida styles. The śikhara, symbolizing Mount Meru as the cosmic





axis, emerged as a defining feature, reflecting theological emphasis on verticality and divine ascent. Pre-Gupta architectural traditions, including the urban planning of the Indus Valley, Mauryan stone pillars, and Buddhist stupas, provided critical groundwork. The Mauryans introduced monumental stone architecture, while Post-Mauryan dynasties like the Shungas and Kushans expanded hybrid art forms, such as Gandharan Hellenistic-Buddhist syncretism. By the Gupta era, these influences coalesced into a distinct architectural language driven by Hindu royal patronage and ritual imperatives. Economically, temples became powerhouses, managing land grants (*devadana*) that transformed them into agrarian estates. These grants funded rituals, irrigation, and welfare, while temple construction stimulated specialized labor guilds and urbanization along trade routes like the *uttarāpatha*. Temples also served as nodes of cultural exchange, integrating pilgrims, traders, and artisans into a networked economy. Post-Gupta architecture inherited and expanded Gupta innovations. The Nagara style's curvilinear *śikhara*s and the Dravida style's pyramidal *\*vimānas\** evolved from Gupta prototypes, emphasizing verticality and regional diversification. The decline of terraced brick temples in favor of stone structures, such as the Kailāsanātha at Ellora, underscored a shift toward grandeur and sculptural complexity. Temples also became instruments of political legitimacy, with dynasties like the Cholas and Pratiharas using them to assert divine authority. The Gupta legacy endured in Southeast Asia, where terraced temples like Baksei Chamkrong in Angkor echoed earlier Indian forms. Thus, Gupta architecture bridged ancient experimentalism and medieval codification, embedding temples as socio-economic, religious, and political anchors in Indian civilization.

## Conclusion

The Gupta period stands as a watershed in Indian architectural history, marking the transition from ephemeral shrines to enduring stone temples that crystallized Hindu sacred space. By formalizing temple typologies and integrating symbolic elements like the *śikhara*, Gupta architects established a design lexicon that shaped medieval Nagara and Dravida traditions. The shift to stone not only ensured structural longevity but also facilitated intricate sculptural narratives, transforming temples into microcosms of Hindu cosmology. Economically, temples emerged as agrarian and commercial hubs, sustained by land grants and pilgrimage networks, which fueled urbanization and specialized labor markets. This era's architectural achievements were rooted in pre-Gupta innovations—Mauryan stonework, Buddhist stupas, and cross-cultural Gandharan art—yet Gupta synthesis elevated these into a cohesive Hindu idiom. The post-Gupta period saw these principles evolve into towering stone complexes, underscoring the enduring influence of Gupta engineering and aesthetics. Temples became instruments of royal



legitimacy, blending spiritual authority with political power, a model perpetuated by later dynasties across India and Southeast Asia. Ultimately, the Gupta legacy lies in its holistic integration of religion, art, and socio-economics, cementing temples as enduring symbols of India's cultural and spiritual identity. By bridging ancient traditions with medieval innovations, the Gupta Empire laid the groundwork for a millennium of architectural brilliance, leaving an indelible imprint on Asia's sacred landscape.

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