

Art and Architecture of The Kakatiyas A Study of Structural Elements and Sculptural Ornamentation

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ABSTRACT

In the 12th century, the Kakatiya Dynasty—a branch of the Andhra Empire—flourished. The Kakatiya dynasty, which reigned over what is now Andhra Pradesh and a large portion of Telangana from 1083 to 1323 AD, was responsible for the region's golden period. Two of the Kakatiya dynasty's most notable kings were Rudrama Devi and Prataparudra II. The assault of Malik Kafur in 1309 A.D. weakened the dynasty, and Mohammed Bin Tughlaq's army vanquished Prataparudra in 1323 A.D., leading to its dissolution. This article takes a look at the Kakatiyas' art and architecture, analysing their temples' artistic handling of structural materials, architectural traits, and historical context. The research examines temple typology, spatial planning, structural improvements, and ornamental programs using a selection of monuments including the Swayambhu Temple in Warangal, the Thousand Pillar Temple in Hanamkonda, and the Ramappa Temple in Palampet. We pay close attention to how sculpture is integrated with various architectural elements like as pillars, walls, cornices, shikharas, entrances, lintels, ceilings, and bracket figures.

Keywords: *Pillars, Walls, Ceiling, Art, Architecture.*

I. INTRODUCTION

From from 1163 to 1323 CE, in what is now Telangana and Andhra Pradesh in southern India, the Kakatiya dynasty built temples and forts in their own unique style. This style is known as Kakatiya architecture. Shaivite temples built in this style are famous for its revolutionary engineering, which includes earthquake-resistant foundations and lightweight floating bricks. The exquisite granite sculptures within the temples include dancers, mythical themes, and cultural elements from the Kakatiya people. It reflects the dynasty's support of art, religion, and water management through its incorporation of natural settings like as reservoirs and hills, as well as its emphasis on star-shaped ground plans and trikuta (three-shrine) layouts.

After Prola II established the Kakatiya dynasty in 1163 CE, they became famous for their assertion of independence from the Western Chalukyas and the fortifications of Warangal (Orugallu) as their capital. The "three Ts"—temples, tanks (reservoirs), and towns—were the primary targets of the massive architectural undertakings commissioned by rulers like Ganapati Deva, Rudrama Devi (the dynasty's prominent female monarch), and Prataparudra II during a larger cultural renaissance. Temples in Telangana reached its zenith during this time, when master sculptors and architects worked together to build magnificent structures honouring the Hindu gods Shiva, Vishnu, and Surya. Several buildings were damaged but subsequently rebuilt following the collapse of Warangal in 1323 CE, which was the last major city of the dynasty and the result of raids by the Delhi Sultanate.

The governmental consolidation and artistic development of the Kakatiya period were mirrored in the architecture's many periods of progression. Under the first period (1163-1200 CE), monuments showcased trikuta (three-shrine) temples with simple designs and small dimensions. One such example is the Thousand Pillar Temple, constructed under Rudra Deva's reign and characterised by a focus on verticality influenced by Chalukyan models. Under the patronage of kings like Ganapati Deva (r. 1199-1262 CE), who expedited temple construction throughout the empire, innovation reached its pinnacle during the mature phase (1200-1300 CE). Trikuta and stellate (star-shaped) plans improved spatial complexity and visual dynamism. During this time, vimanas merged the indigenous vitality with the Vesara fluidity, changing their shape from a curvilinear to a stepped pyramid. During the latter part of the dynasty's reign, from 1300 to 1323 CE, when invasions were becoming more frequent, the focus turned to building fortified temple complexes with defensive features and elaborate superstructures to stave off the deterioration that Prataparudra II had brought about.

The primary style of Kakatiya architecture was focused in Telangana around Warangal and Hanamkonda. Temples like those at Panagallu used basalt for sculptural highlights and locally sourced granite for solid foundation. Geography and resource availability created regional variations in this style. Adaptations were made to accommodate different geological circumstances, such as dolerite outcrops, which affected plinth designs and material selections for stability in seismic-prone places. Sandstone was used for finer carvings in extensions to Andhra regions, including Pushpagiri (c. 1255 CE). Differentiating Kakatiya art from its purer Chalukyan antecedents, these modifications maintained the Vesara fusion while localising elements, such as floral and mythological motifs derived from Deccan tradition.

II. HISTORICAL BACKGROUND OF KAKATIYA ARCHITECTURE

The Kakatiya dynasty, which flourished in the eastern Deccan from the tenth to the early fourteenth century CE, is intrinsically related to the historical context of Kakatiya architecture. During their early years as a feudatory of the Kalyani-based Western Chalukyas, the Kakatiyas drew heavily on Chalukyan architectural traditions, particularly the Vesara style, which successfully combined elements of temples in the northern Nagara and southern Dravida regions. Beta Raja I, Beta Raja II, and Prola Raja I were among the early kings who established the social and political norms that would eventually allow for innovative building designs. Upon Prola II's proclamation of independence in the mid-twelfth century, the Kakatiyas started to use monumental architecture as a means of expressing their sovereignty. They utilised temple construction and urban planning as tools for political legitimacy and cultural identification. During its rise to prominence as an administrative and cultural hub, Orugallu (now known as Warangal) became an architectural showcase for the region's royal might and national pride.

The zenith of Kakatiya architecture, which reflected affluence and creative sophistication, occurred under the reigns of strong rulers such as Ganapati Deva, Rudradeva, and Rani Rudrama Devi. Numerous Shiva temples were built at the dynasty's height of Shaivism, although support was also given to Vaishnava and Jain institutions, showing that there was religious tolerance. The locally available reddish sandstone was creatively used by Kakatiya architects. It could be delicately carved and polished, giving monuments a unique texture and making them long-lasting. Foundations were placed in trenches filled with sand and organic materials, enabling enormous stone structures to endure ground movement and stay solid for generations. This method, developed during this period, was one of the most amazing contributions to engineering. This method exemplifies the local environmental awareness and expert technical understanding of the Kakatiya builders.

The Thousand Pillar Temple at Hanamkonda and the Ramappa (Rudreshwara) Temple at Palampet are two of the finest examples of the Kakatiya period's refined architecture. Sculptural brackets, lathe-turned pillars, ornately carved ceilings, and narrative panels portraying gods, dancers, animals, and everyday life

attest to the buildings' elevated level of creative complexity. Aesthetically pleasing and rhythmically complicated, the star-shaped or stellate plans were preferred for the exteriors of temples. Warangal Fort's enormous stone gates, or toranas, are also noteworthy for their enduring emblems of Kakatiya authority and their combination of mammoth size with exquisite adornment. The Kakatiyas integrated architecture with civic life and the agricultural economy through the construction of forts, roads, tanks, and irrigation systems; their contributions to urban development extended beyond religious structures as well. Thus, the architectural style of the Kakatiya dynasty reflects their religious beliefs, political ambitions, and creative brilliance; it is a unique regional heritage that developed via the integration of passed-down traditions with innovative local practices.

III. ARCHITECTURAL CHARACTERISTICS

Temple Typology and Layout

According to the principles of Vastu Shastra, which state that all significant buildings should face east in order to coincide with sun routes and ceremonial activities, Kakatiya temples are categorised according to the number of shrines. The ekakuta is the most basic type, with just one shrine; dwikuta temples, on the other hand, have two shrines set out in a symmetrical pattern. The most prevalent type of Hindu temple is the Trikuta, which normally has three shrines devoted to Shiva, Vishnu, and Surya and is constructed on a cruciform ground plan to allow for circumambulation. Extending this multiplicity to four shrines in the chatuskuta variation and five shrines in the panchakuta version—both of which are less common—allows for enlarged ritual spaces within a cohesive complex. The central design of Kakatiya temples follows the principles of spatial hierarchy and holiness as outlined in Vastu Shastra. The priests are the only ones allowed entry to the garbhagriha, the enclosed sanctuary that houses the main image of the god. The ardhmandapa, a small entryway for preliminary ceremonies, leads into the sabhamandapa, a wide open hall for assemblies, dances, and community meetings. The vimana is a tall superstructure that rises over the garbhagriha. In older Kakatiya instances, it takes on a star-shaped form, which adds visual interest and symbolises the cosmos through recessed walls and recursive projections. The main temple is complemented by adjoining structures that lack the tall gopuras seen in later Dravidian forms. Instead, these structures include kirti toranas, which are elaborate arch-like gates that signify royal sponsorship and serve as entrance markers. The Nandi mandapa is a devoted secondary shrine that houses the holy bull Nandi and faces the Shiva linga. It is often placed on a platform so that visitors may see it. The complex is encircled by prakara walls, which also serve as routes for pradakshina, or circumambulation, and as protective bounds that designate the sacred precinct. By placing buildings next to man-made tanks for ceremonial bathing and water purification procedures, Kakatiya temple designs blend with wider landscapes in accordance with Vastu Shastra's stress on ecological harmony. This is an example of thoughtful town design that fostered agricultural sustainability and communal cohesiveness by connecting the temple, nearby sources of water, and surrounding towns into a harmonious socio-ritual ecology. From its origins as Chalukyan prototypes, early Kakatiya designs quickly adapted stellate plans and Vesara features into a localised manifestation.

Structural Innovations

In order to guarantee stability in seismically active zones, Kakatiya architecture utilised novel foundation techniques, such as sandbox technology, to a large extent. This technique entailed digging a hole and then filling it with sand, gravel, and occasionally organic additions like jaggery and lime to provide a porous base that could absorb earthquake shock waves and protect the superstructure from harm. The sandbox served as an early type of base isolation, which allowed structures like the Ramappa Temple to maintain their elevated platforms even while the ground underneath them changed. In addition, molten iron was

poured into drilled holes to produce interlocking clamps, which the builders used to secure individual stone blocks. This reduced vibrations and improved the joint integrity across walls, pillars, and roofs. Locally produced materials were used for construction in a way that minimised weight and maximised durability. Granite was used for the bases and columns that supported the building, sandstone for the decorative parts, and lightweight bricks were manufactured from clay combined with rice husk or other porous agents. Superstructures like the Ramappa Temple's roof made use of these "floating" bricks—which are just one-third the weight of regular bricks and can float on water—to reduce the total load on foundations. Forts and temple gates like the ones at Warangal made use of corbelled arches and beams as structural components, with stones being cantilevered in stages to create curved or lintel-supported spans in lieu of genuine arches. This allowed for the effective distribution of weight. The vimana, which meant "tower over the sanctum," had a unique pyramidal shape with progressively lower levels that rose in a regular pattern, and it was common for the platform and facade to have stellate projections that let light in and made interesting shadow patterns. As seen in the trikuta layouts typical of Kakatiya temples, this style improved visual depth while preserving structural balance by combining Dravidian stacking with minor curved shapes in the higher areas. Temples in the Kakatiya period were typically sited next to reservoirs that were purpose-built for irrigation and ceremonial usage; these reservoirs generally had clay dams fortified with stone revetments and were controlled by sluice gates. In the 13th century, the Ramappa Cheruvu was built as a tank covering about 82 square kilometres. It had a 600-meter-long earthen bund that was used to collect monsoon runoff, which helped the local farmers and created a reflective background that made the temple blend in with the landscape even more. Ensuring year-round water supply in the parched Deccan surroundings, stepwells called pushkarinis were also placed within temple precincts. These wells had stepped access and subterranean chambers for groundwater gathering.

Decorative and Sculptural Elements

The complex lathe-work on the pillars, known as latha or lotus-stem turned pillars, is a hallmark of Kakatiya architecture. Typical decorations on these pillars include dancing figures striking dynamic positions, legendary figures like Ganesha at the bases and capitals, and flower designs that flow down the pillars to represent natural themes. As an example, the Ramappa Temple (Palampet) showcases the deftness of lathe-turned embellishment with its 32 pillars in the sabhamandapa embellished with detailed carvings of drummers and dancers. In a same vein, the Thousand Pillar Temple's interior area is visually enhanced by the latha pillars that are decorated with legendary and floral features. The intricate carvings on the walls and beams of Kakatiya buildings are another evidence of the period's mastery of sculpture. Notable among them are the black basalt Nandi sculptures, which are renowned for their lifelike features and highly polished surfaces. An excellent example is the life-size monolithic Nandi at Ramappa Temple, which is sculpted from black stone and includes expressive features and complex haras. Beams and walls are adorned with narrative friezes that illustrate episodes from epics like as the Ramayana and Mahabharata. These images include Siva's marriage, the Saptarshis, and the churning of the milk ocean in places like Pillalamarri. The sculptures delicately incorporate erotic elements that draw from older sculptural traditions. For example, in the Palampet friezes, one may see characters such as Rati pointing a sugarcane bow at Ramappa or a monkey gleefully tugging a saree. Kakatiya decorations are visually distinct due to its use of symbolic themes and motifs that harmoniously combine Shaivite and Vaishnavite iconography. Gates and arches are embellished with makara, or crocodile toranas, which are frequently combined with yakshas and swans, as seen in the elaborate Kakatiya Thoranam at Warangal. Palampet displays examples of bracket forms supporting beams performed by heavenly dancers, or salabhanjikas, with 20 dancers and 40 drummers in lattice screens. Icons of Siva, Vishnu, and goddesses like Gajalakshmi represent the syncretic religious symbolism throughout buildings like the Thousand Pillar

Temple, while geometric patterns adorn vimanas, including stepped shikharas at temples like Sambhunigudi. Examples of this skilled craftsmanship in Kakatiya sculpture are the Veerabhadra statues at Hidimbasrama and the Mahishasuramardini panels, which have high-relief carving with deeply carved and polished patterns to create the illusion of depth. The toranas and pillars of Rudresvaralaya, in particular, include metal inlay work that reflects light, using components like molten iron that are prefabricated. To make a statement, artists used varying sizes of frieze figures, such as 10-inch soldiers on Palampet beams or 4.5-foot Vishnu icons at Katakshapur, to contrast with life-sized Nandi sculptures. This created a feeling of movement and hierarchy within the design scheme.

IV. ART ON THE ARCHITECTURAL ELEMENTS OF KAKATIYA TEMPLES

The Kakatiyas were known for their extensive temple construction and diverse performance arts. Their devotion to the arts was on full display in the temples they constructed, which included exquisite sculptures and a plethora of loose icons for religious veneration. The Kakatiyas's artistic sensibilities were on full display during their rule, when plastic art reached its zenith.

Displaying the architectural marvel are structural elements such as mandapas, adhistanas, padavargas, prasharas, beams, ceiling, and vimana, which are decorated with kakatiya art.

Typical adishthana embellishments seen on Kakatiya temples in Palampet, Ghanpur include vajra bandha patterns and creepers. At Warangal Fort, you may find the Swayambhu Temple, which is adorned with friezes depicting swans, elephants, horses, and gajavyalas. Adistanas in Kakatiya temples are neither too simple nor overly embellished with figures and motifs, demonstrating that the Kakatiya sculptor has always struck a good balance between the two. The sculptures also adorn the kakashanas on the capitals. They have an elephant frieze cut onto the surface. Deities, goddesses, dancers, musicians, amorous figures, Mahishasuramardini, Narasimha fighting Hiranyakashipu, and other legendary characters adorn the Kakshanas at Palampet.

Wall Decoration

Temples built by the early Kakatiya were characterised by their simple outside walls. A simple middle band of stepwise architectural pilasters was used to evaluate exterior wall decorations during Rudradeva's reign. The outside walls of Kakatiya temples are adorned with projections and intervals, stambika, vimana patterns, and rows of figurines depicting deities, musicians, dancers, animals, and male and female figures.

Kapota or Cornice

In most cases, the portion of a temple's roof that juts out beyond the walls is called the kapota or cornice. It shields the outside sculptures and walls of temples from precipitation and other projecting elements while distributing and balancing the roof's and superstructure's weight. The cornices of Kakatiya temples are short and protrude outward. A little cornice will often be thick, flat, and not very projecting. Standing at almost one foot above the level of the roof, the projected cornices are enormous and striking. A series of semicircular elevations decorates the upper border of the cornice. The kapotas' bottom portions are partitioned into several sections by horizontal and vertical rafters adorned with a succession of hanging lotus designs. Palampet and Ghanpur, both in the Warangal district, feature comparable patterns.

Sikhara

At the very top of a temple, above the sacred space, you can see the sikhara, also called the superstructure. Nearly all of the Kakatiya temples feature roofs that are semi-flat. Bricks and stones were used for their construction. Kakatiya temples have a variety of shikharas, including Nagara, Bhumiya, and Dravida shikharas.

Doorways

The designers and artisans of Kakatiya were so meticulous and skilled that they produced works of art in the form of doors. The artistry and detail put into carving each and every inch of the door is indescribable. It is stunning, beautiful, varied, and full of life. Every detail has been carefully considered and executed in their design and decoration. Stones such as sandstone, granite, and black basalt are commonly chosen for this purpose.

Floral scrolls, vyalas, and figure carvings adorn the doorways of the Kakatiya temples at Swayambhu Temple at Fort Warangal, Palampet Temple, and Thousand Pillar Temple at Hanmakonda. They have minutely formed projections that foliate. Overhanging the entrances are elaborately carved lintels. Using purnakumbhabase, jambs adorn the stambasakha, ratnapuspasakha, and plain sunken bands. The gatekeepers live at the bottom level of the base. They show men and women holding purnakumbhas and cameras in elegant tribhanga positions. There is a picture of Gajalakshmi on the Mangal plaque.

Lintels

The lintels of the majority of Kakatiya temples are often stacked. Figures and creepers are elaborately carved into the lower section. Narasimha and Nataraja, dancing figures, adorn the entrances of the Hanamakonda temple, which has a thousand pillars. In the Warangal district, you may see temple pits carved with Shiva Natarajas, Saptarishis, and Dikpalas in Jakaram and Ramanujapur.

Architrave

This specific entryway has been exquisitely adorned by the Kakatiya sculptors. They have sculptures like Shiva Nataraja and musicians and dancers in addition to three or five nagaravimanas. A flowery arch, often made from the mouths of makaras set at the extremities of the architrave, canopied the whole panel in certain instances. The Thousand Pillar Temple, the Shiva Temple in Machilibazar, the Venkateswara Temple in the Gudibandala region of Hanmakonda, the Ramalingeswara Temple in Ramannapet, Warangal city, Palampet, Nidigonda, and Ghanpur are some of the finest examples of this kind of ornamental sculpture.

Cellings

An important part of each temple's interior is its cellings. Their purpose is to amplify the aesthetic impact of the temple's interior design. In most temples, the focal point is the central roof of the sabhamandapam. Black basalt allowed the period's sculptors to focus their abilities and pay close attention to detail as they worked on this sculpture. Typical floral designs seen on temple roofs include the eight-petaled Susniapatta, the sixteen-petaled batasuniya, and the four-petaled caukaphula or caudaphula. Leaves, kirtimukhas, deities, dikpalas, and other embellishments adorn the triangle corners. In shaping and creating the object, a number of methods are employed. Decorative flowery scrolls, beadwork, vyalas, wands, and other triangular stabs have been known to be quite elegantly executed. Pendanted is the lotus. However, a massive cylindrical pendant projecting out from its core may be seen in the major temple at Palampet and the thousand pillared temples at Hanmakonda. Nataraja and Ashtadikpala are seen in the engravings on the pendant.

Pillars

When it comes to the design of the temple, this pillar is essential. The sabha and mukhamandapa arrangement of a Kakatiya temple's pillars not only adds depth to the interior but also improves the temple's aesthetics. It is the pillars that mostly determine a temple's height, splendour, and majesty. The pillar, despite its elaborate and beautiful carving, never loses its essential role as an architectural

component in Kakatiya temples. Beautiful designs and motifs adorn the pillars of Kakatiya temples. Despite the pillar's abundance of detail, it is tasteful throughout, from the foot and shaft to the capital and brackets.

Bracket Figures

The bracket figures are the most eye-catching aspect of Kakatiya temples. Their exquisite craftsmanship complements the stately façade of the temple. When it comes to sculpture, there are two distinct kinds of bracket figures. The first kind stands for ornamental architectural elements (lateral brackets), while the second kind stands for the legendary beast that belonged to Vyala (madanika). The major temple of Palampet houses the most exquisite Madanika sculptures. The graceful modelling, designing, and carving of these Madnikas is the result of the Kakatiya sculptors' deft touch with the chisel and their effortless calligraphy.

V. CONCLUSION

The Kakatiyas' art and architecture are an outstanding accomplishment in the annals of South Indian temple traditions; they are defined by an accomplished union of structural innovation with sculptural finesse. With its origins in Chalukyan architecture, the Kakatiyas developed their own unique regional style that is now known for its stellate designs, balanced proportions, and close relationship between art and architecture. Their sacred buildings were masterworks of architecture, design, and ritual function; they were more than just houses of worship. Without overpowering the structural foundation, architectural elements like ceilings, pillars, adhisthanas, lintels, entrances, and bracket figures were adorned with narrative, ornamental, and symbolic symbolism. To make sure sculpture emphasised rather than masked structural clarity, the sculptors struck a careful balance between embellishment and restraint. In addition, the representation of legendary figures, animals, dancers, musicians, and deities highlights the intimate relationship between temple design and modern religious activities, the arts, and social life. Evidence of the eclectic cultural ethos of the Kakatiya period may be seen in the prominence of Shaivite images alongside Vaishnavite and other iconographic elements.

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