

Dance and Music in Indian Temple Architecture

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Abstract -Fine arts in the form of dance, music, painting, sculpture or architecture have a great power of attracting the attention of human beings of diversified interests and tastes. Indian art in the form of dance, music, theatre, poetry, painting, sculpture, architecture have evolved through the centuries in complementing each other. They coexist as an intertwined system of Hindu philosophy. The art forms of music, dance and architecture define the three-dimensional space by sharing a special relationship. Human existence and his activities, structure the architectural space. The ancient Hindu temples are well known for their magnificent architecture and construction. Almost all the temples across the country have majestic and beautiful sculptures carved on their interior and exterior façade. These sculptures include various Gods and Goddesses, mythological creatures like Yakshas and Yalis, Flying Gandharvas, Dancing figures, Musicians playing various instruments, animals like horses, elephants, bulls are most prominent. It is also mysterious to see that the pillars which in absence of heavy carvings are made to produce melodic sounds. This paper attempts to illustrate upon the connection and relation between the art forms of music and dance through the folklore of temple architecture.

Key Words: Temple architecture, Natyashastra, Sculptures, Mantapas

1. INTRODUCTION

The architecture of India is rooted in its history, culture and religion. Indian architecture progressed with time and assimilated the many influences that came as a result of India's global relation with other regions of the world through its past. The establishment of traditions and cultural interactions led to the examination and implementation of the various architectural methods practiced in India. Music and Dance have been the integral part of the Indian performing arts and showcases the diversity with the region. The temples play an important role in the social, economic and spiritual life of the people.

Choodamani Nandagopal in her article – 'Indian dance and other arts' say 'What the thousand words cannot communicate, dance hand gestures or few lines and colors create a great sense of visual impact of everlasting nature. Many philosophical or religious paradoxes that are found extremely difficult to touch the minds of people are conveyed with ease through the medium of art. Every culture in its formative stages have applied the visual and performing art forms to communicate the complex ways of religion and thereby brought the followers into the fold of collective

consciousness. The art would take the people to a state of wellbeing which could motivate them furthering the cause of human progress.'

The temple in Indian art is symbol of the universe inhabited by Gods, demi-gods, human beings and animals which are represented on the walls, pillars, ceilings and door jambs. Both good and evil which exist in total reality are taken into account. This is an important theme in Indian art. The temple is also the spiritual center regulating not only the religious life but also the social activities of man. Here, one gets to learn all fine arts and the very art of living. Hence all aspects of life are depicted on the temple walls. (Banerjee 2004:23).

Some of the temples built between 8th and 16th century have the interesting architectural elements like musical pillars and musical steps. They are made of solid granite stones. The musical pillars and steps are often carved from a monolithic solid granite stone with calculated geometry like length, diameter and carvings and are tuned to produce the proper pitch and scale and tones. The produced sound thus fills the atmosphere with melody. They were played to accompany the devotional hymns and often as the percussionists to the vocal singers and dance performers.

In the Thillai Natraja temple at Chidambaram, the Raj Gopuram has carvings of 108 postures of dancing (Bharatnatyam). Similarly, the ancient sculptors infused music in the stones used in the temple construction. They not only produced musicians playing various instruments but also chiseled various sound producing elements. One can come across musical pillars, musical stairs, bronze and stone musical icons, musical bells and musical pipes made out of stone.

2. NATYASHASTRA – EVOLUTION OF INDIAN PERFORMING ARTS

Natyashastra is a written Sanskrit text on the performing arts, drama, theatre, dance, music and other various topics. The word Natyashastra also refers to a global category of literature encompassing the ancient Indian tradition of dramatic performance. The work dates back to as far as at least 1st millennium BCE. The text consists of 36 chapters with total 6000 poetic verses covering the subjects that include dramatic composition, structure of a play and the design of the set, genres of acting, body movements, costumes and make up, musical scales and instruments and overall synchronization of the art. The Natyashastra is notable as an ancient encyclopedic treatise on the arts, one which has influenced dance, music and literary traditions in India.

India being the land of rich culture and heritage had music, dance and drama as the integral part of the cultural society since beginning. The art forms so developed were

used as a medium to project the religion and social reforms in the society. No sooner then, it gained the popularity and remained as an important source for educating the community. The sacred art form of dance is said to have been the child of the creator of the universe in the Hindu trinity of Gods, Brahma. The overall concept of classical dance forms is equivalent to the Sanskrit word 'Natyā' which combines dance, music and drama. These three aspects are inseparable from each other.

The dramatic scriptures of our country are said to have been brought into human being by Brahma at the request of the lesser gods. The blessed Brahma framed the Natya Veda gathering parts from the four Vedas. From the RigVeda he drew forth words, from Sama Veda, singing, from Yajur Veda, gesture and from Atharva Veda, flavour. Brahma taught this science of 'Natyā' to Bharat Muni and his hundred sons and Bharat compiled the rules and norms of this artistic science or scientific art into his famous treatise 'Natyashastra' (Bose,1989).

Specifications provided in the Natyashastra can be found in the depiction of arts in sculpture, in icons and friezes across India. In her book 'The Square and the Circle of the Indian Arts', Kapila Vatsyasyana says – the imagery of the Upanishadas and the elaborate ritual of the Brahmanas is the ground plan for each of the arts, be it architecture, sculpture, painting, music, dance or drama. The artist repeats and chisels this imagery by giving it concrete shape through stone, sound, line or movement. The movements of dance and expression in the Natyashastra are found on the pillars, walls and gateways of the 1st millennium Hindu temples. To acknowledge the relation between dance and place, we have to go back to the origins of architecture and temple dance.

3.DANCE AND TEMPLE ARCHITECTURE

Indian arts are well expressed through Indian temple architecture. When viewed in totality temples in India can rightly be considered the cradle of Indian art forms and they stand tall to our great cultural heritage. When a comparison made with the Indian temple to the western religious edifices, the essence of Indian artistic spirit springs up. From Structural point of view, the Greek temple, the Romanesque church and the Gothic cathedral, all served their purposes equally well. But the differences in the ratio between the base and height create different aesthetic appeals. The spaces these temples create suite the taste of Indian art forms.

The Buddhist, Jain and Hindu temples carved out with sculptures gained more meaning and beauty. ChoodamaniNandagopal in her 'Indian Dance and Other Arts' says - Maximum freedom was given to artists to render aesthetic creations that encouraged the artists to create sculptures in stone and in metal to portray the elements of beauty thereby evoking *rasa* in the onlookers. The enchanting, beautiful and varied poses of dance led the Indian sculptures and their placement in the architectural space to become monotonous with the repetition of the same *bhargas*. Thus, the artist very intelligently enriched not only his medium of expression but also the art of dance and thereby made use of dance in his sculptural art. Thus, this made Indian architecture and sculpture inseparable from dance. Indian temple architecture flaunts hundreds of sculptures showcasing the musical instruments and the techniques of dance as prevalent in the respective period. Any attempt at reconstructing a

history of the classical dance in India would not only rely on dance texts and commentaries down from Bharata's *Natyashastra* but of necessity delve deep into what was preserved in the practicing tradition of preceptors as well as dancers.

It can be seen that architects and sculptors from ancient times had a deep knowledge of Indian classical dance forms. From the technical point of view, it is very difficult to find the defects in the dance poses. Thus, sculptors and painters had a good knowledge of Natyashastra. It can be vividly seen that the inscription about an actor 'Achalan' can be found in the 8th century AD through the two Sanskrit verses in praise of him found on the rear side of the Virupaksha temple at Pattadakal. He knew the techniques of drama and acting and hence was well known as Nartaka and Natya from Bharata's *Natyashastra*. The sculptures in the temple of Pattadakal had an inscription of Achalan's performance.

4.DANCE THROUGH PAINTINGS

Painting is an expressive, two-dimensional art. The early representation of paintings in India is well documented at the pre-historic sites of Bhimbetka. According to ChoodamaniNandagopal – Paintings, the art form and pictorial statement are the outcome of the aesthetic temperament of Gupta-Vakata period during 3rd to 5th century A.D. The cave paintings of Ajanta have been proved as one of the greatest eras of significance in terms of techniques and vibrancy of expression in the history of world painting. Quality of Rhythm can be seen on the walls of Ajanta through *chitra* starting from *chouri* bearer to BodhistvaPadmapani. Every figure is coated with the force of the rhythm, elegant poise and spontaneity in emotions and movements. The fabulous paintings of a dancing scene from Cave I, *Mahajanaka Jataka* draws a special attention. This is a circular composition where the dancer is the centre of attraction, she is in a position of intermediary movement and the artist has lent fluidity in the posture. The head gear, curved hands, angular bending of knee and waist indicate a circular movement, in all it associated with the present odissi form of dance. Another depiction of dance in Ajanta painting is in the scene of the Temptation of Buddha where the dancers have acquired swastika positions with *kapithahastas*. This posture is identified as an *avahittasthanka* a standing posture for *nayikas*, divine beings like Parvati, Lakshmi and other *Devanganas*.



Fig -1: Painting at Brihadeeshwara Temple, Tanjore

The performing and visual arts got patronised under the Gupta dynasty and paved the way for upcoming dynasties to follow. The cognate styles are mainly drawn from the Gupta period in dance and paintings with little variations as per the region. The paintings of court dancers and musicians can be found on the interior walls of the Badami and Sittanavasal caves, Temples of Brihadeshwara at Tanjore, Virupaksha at Hampi and Virabhadra at Lepakshi. The miniature paintings epitomized the dance and music in the form of Nayikabhava, Gitagovinda, Rasleela and Ragamala series, depicting the glimpses of imagery that has harmonised various art forms. Thus, paintings had great impact in elevating the essence of temple architecture.

5.SCULPTURE AND DANCE FORMS

The best source of human expressions, movements, rasas and bhavas of applied dancing techniques can be seen through the sculptures. The art of dance and sculpture can be vividly seen through temple architecture in 13th century in North India and 16th century in South India. The temple dances held in the temple premises must have inspired the sculptors to create the dancing sculptures. They have projected the actual dance forms through these beautiful images. The sculptures in the temple architecture all over India are strictly adhered to the regulations set according to the Natyashastra.

The study says - The first occurrence of dance in sculptures is visually recorded in the processional scenes in the panels of Bahruth in 2nd century B.C. where the dancers are leading a Buddhist procession. In one panel there are two dancers holding their hands high in *pataka hasta* as if they are heralding the banner of Buddhism and the other hand in *pataka* keeping close to their ears. Their facial expression and neck positions show that they are singing in a high pitch and their foot position show *kshipta* nee in movement. They are supported by musicians with *urdhva* drum, a harp like stringed instrument, a cymbal player and another musician with a string instrument. This panel must be the first again to consider as source for the study of musical instruments in India. In the other panel four dancers are in a movement with similar hand gestures and supported by musicians. (ChoodamaniNandagopal, Indian Dance and other Arts).

The origin and development of classical dance is well being portrayed in the Shiva PradoshaStotra as dancing I the golden hall of temple. The great impact of this can be found in the architect's expression by constructing the massive natyamantapas of high merits in the temple premises. It can be seen that Natraja's dance is highly supported by the accompanists including Saraswati playing Veena, Indra on flute, Brahma on cymbals, Vishnu playing *mrdangam* while Lakshmi singing. The gods, demi-gods, *apsaras*, *yakshas*, *gandharvas* stand around to witness the celestial dance and hear the music of the divine choir of the twilight. This faithful rendition of the divine theme gushed out in the form of expressive panels both in the rock cut architecture and on the magnificent edifices of the Chalukyas, Pallavas, Rashtrakootas, Cholas, Hoysalas, Pandyas, Chandella, Sena, Kakatiya and Vijaynagara styles. The earliest historical illustration of Nataraja, preaching the Natyagama can be seen during the Chalukyan dynasty at Badami and Aihole in the mid sixth century A.D.

A.Temples from Karnataka

Karnataka has been ruled by many kings and rulers across the centuries. The great dynasties that included Kadamba, Badami, Chalukyas, Hoysalas and Vijaynagaras contributed a lot in the construction of temple architecture. The dance sculptures and paintings could be seen and experienced as a testimony to the art in the society. The temple building activity had started by the Kadambas. The Chalukyas, Hoysalas and Vijaynagaras added more elegance to it and the beauty got epitomised through the magnificent edifices.

• The Chalukyas -

The Chalukyas of Badami were the great patrons of art and architecture and gave the world the gift of temple architecture. The chalukyan artists experimented with the architecture. They blended the styles of Indo-Aryan or the North Indian Nagara style and the south Indian Dravidian style and developed their own style called as 'Chalukyan style' or 'Vesara style'. It can be vividly seen at Badami, Aihole and Pattadakal.

Fine arts and literature in south India developed during 973 CE under the rule of Chalukyas of Kalyana. They built beautiful monuments. King Someswara III developed the fields of arts, science, medicine, architecture, music and dance in the monumental work 'Manasollasa'. Fine arts and literature flourished during their rule. The temple architecture was in full swing during their reign. The architecture style developed during the latter Chalukyan period was noteworthy. The temple interiors are richly carved with figures of deities, dancing images and other decorative motifs. The uniqueness of carving dancing girls in the niches and recesses of walls became very popular during this period. Many features of this style were later adopted by the Hoysalas.

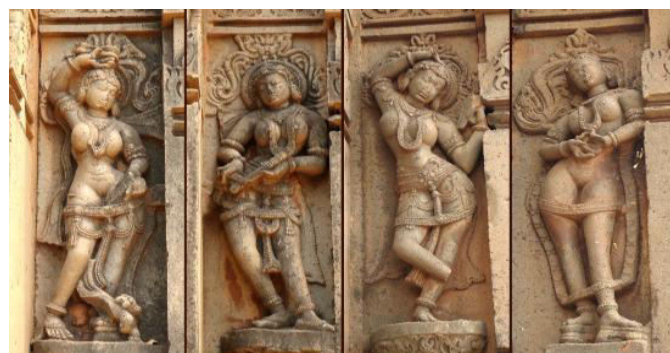


Fig -2: Jalesangavi Temple, Bidar

Some of the temples that are decorated with dancing sculptures are the Kashi Vishveshwara temple, Nanneshwara temple at Lakkundi, the Mallikarjuna temple at Kuruvatti, Trikuteshwara, Someshwara and Saraswati temple at Gadag, Mahadeva temple complex at Itagi, Siddheswara temple at Haveri and Kedareshwara and Tripurantakeshwara temple complexes at Balligave. The temples have beautiful dance sculptures showing the new techniques adopted in the dance tradition during their time. The pillars of the temples consist of miniature images of both dancing and decorative motifs. Unfortunately, many of the dance sculptures are damaged.

• **The Hoysalas–**

The Hoysala rulers were the great patrons of art, architecture and literature. The dynasty had their kingdom between early 11th century and middle 13th century spread across much of the modern Karnataka and several parts of Tamil Nadu. Hoysalas built several temples across the kingdom but very few of them are in good condition. They celebrated the fine arts of medieval Karnataka which can be clearly seen through their temples. Renowned archaeologist S R Rao says Hoysala temple architecture occupies a special place in the history of Indian art because of the exquisite carvings and sublime thoughts expressed through the medium of plastic art. An important feature of Hoysala temple is the sculptural treatment imparted to every architectural element (Nagaraj 1990:5). Dancing sculptures were abundant in the Hoysala temples. According to GererdFokeama opines that every nook and corner of Hoysala temple including niche, recess and projection from the plinth up to the roof is packed with gods. Goddesses, demi gods, human figures and animals (Foekeema 1996:11). The Hoysala temples are filled with the figures dancing and playing musical instruments. Dance has influenced the Hoysala temples so much that even the ordinary activities like pulling the thorn from the sole of the foot or applying Tilaka on the forehead are all presented in a dancing posture. They developed the style of bending of waist and limbs that can be seen in the niches and brackets. The bending style is nabhangi and tribhangi.



Fig -3: Chennakeswara Temple, Belur

Hoysala temples are the amalgamation of dance and music. The sculptures are ornate and exuberant of all the dance sculptures. They bear the testimony for the transformation of the practicing tradition of dance. The style is distinctive and can be classified in between ‘marga’ and ‘desi’ tradition. New poses, ideas and sequences came after incorporating the desi style. The Chennakeshava temple at Belur built by Vishnuvardhana in 1117 AD and completed by Narsimha II has a pillared hall (Navaranga), a vestibule (Antarala) and sanctum sanctorum (Garbhagriha) all set in an axial fashion. The elegance is multiplied due to the delicately carved bracket figures, doorways, walls, pillars, screens and the main deity (Nagraj 1990:18)

The Hoysaleshwara temple at Halebidu is a remarkable structure and perfect example of Hindu style of architecture. The architecture is regarded as the ‘supreme climax of Indian architecture’. The exterior walls are decorated with splendid dance sculptures. The construction of this temple got completed in 1121 CE. It has two shrines, one dedicated to lord Hosyalshwara and other to Shantaleshwara. The temple is

made from Chlorites Schist, popularly known as soapstone. It is standing on a raised platform with exterior walls divided into three sections – sculptural friezes depicting elephants, horses and riders, lions and narrative scenes at base, large panels depicting deities and other figures at middle and depiction of temple tower at the top. All the Hoysala temples have square Rangamantapa at the centre decorated with ornate pillars. The mantapa has been used by the dancers for their performances to honour the deity. The middle section of the Hoysala temple has numerous dance sculptures. Other Hoysala temples include Kedareshwara temple at Halebidu and Lakshmi Narsimha temple at Arasikere too have immense carvings and sculptures.

• **The Vijayanagara–**

Vijayanagara empire lasted between 1350 AD and 1565 AD. Krishnadevaraya and other Vijayanagara rulers always encouraged art and architecture. They promoted religion and culture through their buildings and this can be seen through the presence of large number of dance sculptures in the temples. Percy Brown in the praise of Vijayanagara monuments say - It is a record in stone of a range of ideals, sensations, emotions, prodigality, abnormalities, of forms and formlessness, and even eccentricities, that only a super imaginative mind could conceive, and only an inspired artist could reproduce (Brown 1942: 91). The performing arts are reflected through the sculptures of Vijayanagara temples. Pillars of Virupaksha and Achyutaraya temples have splendid dance sculptures both in ‘marga’ and ‘desi’ karanas. Dancing sculptures depicting Holi dance sequences are best carved on the outer walls of the Hazara Rama temple. The sculptures on the Achyutaraya temple, Vijaya Vitthala temple and Krishna temple have rare and beautiful dancing poses in both ‘marga’ and ‘desi’ style.



Fig -4: Hazara Rama Temple, Hampi

Virupaksha temple built in the 7th century is the oldest active temple. The temple complex has sanctum sanctorum, pillared halls and huge Gopurams. The pillared hall stands as a testimony for the style of dances that were practiced in the olden days. Dance sculptures in both ‘marga’ and ‘desi’ style can be found on the pillars and walls. Achyutaraya temple is important for dance sculptures. The temple is dedicated to lord Tiruvengalanatha, an avatar of lord Vishnu. The innovative techniques of temple architecture can be found here. The pillars of the courtyard are embellished with the images of dancers, musicians and other narrative figures. The

sculptures on the pillars gives insight into the social, religious and cultural aspects of the society. Vijaya Vitthala temple built in 15th century is believed to be the masterpiece of Vijayanagara period. Temple is enclosed with courtyards and pillared halls. The images on the Adhithana panel of the main shrine and pillars reflect the music and dance traditions of Vijayanagara dynasty.

B. Temples from TamilNadu

The gigantic temples adorn the southernmost state of Tamil Nadu. These temples stand tall as a glorious heritage of the Tamil culture. Many rulers of the Pallava, Chola, Pandya, Nayaka, Vijayanagara and Marthta dynasty have contributed a lot in constructing these massive edifices. These temples exhibit a majestic grandeur and sculptural wealth. Temples in Chidambaram, Tanjore, Kumbakonam, Virudhachalam, Tiruvannamalai and Tiruvadigai have immense carvings and sculptures both inside the temple complex as well as on the gopurams which attract lot of devotees and tourists throughout the year. Brihadeshwara temple is the prominent temple of Tamil Nadu. Built by the great Cholan king Raja Raja Chola in the 11th century signifies the power and strength at the peak of his rule. 81 out of 108 margakaranas are demonstrated on the walls of the vimana. The graphical images show that this temple sheltered musicians and dancers. The temple is constructed in the Dravidian style with huge fortified walls consists of some beautiful paintings of Chola and Nayaka period.

The temple town of Kumbakonam has both Vaishnavite and Shaivite shrines. Sarangapani temple, Kasi Vishwanath temple and Kumbeshwara temple are known for their sculptures. Sarangapani is the important Vaishnavite temple. The pancharangakshetra was built by the Nayaka rulers in the 15th century. The temple has twelve storeyed towers. The garbhagriha is in the form of chariot. The representation of margakaranas can be seen in the temple. In the interior, pillars and ceiling panels are decorated with various postures from desi charis and karanas. The famous Airavateshwara temple at Darasuram is known because of its intricate and beautiful sculptures. The temple built by Rajaraja Chola II in the 12th century is in the form of a chariot being pulled by elephants and horses. The temple is the best example of Chola architecture. The door frames, adhistanas and outer prakara walls have dancing sculptures both of graceful and acrobatic nature. Also, the pillars of mahamantapas and ardhmantapas are decorated with ornate dancing figures.



Fig -5: Airavateswara Temple, Darasuram

The famous Ranganathaswamy temple at Srirangam is massive in proportion. The temple is enclosed within seven concentric enclosures with the tallest gopuram on the outermost side. The Venugopalaswamy shrine has numerous dance images and carvings on the adhithana panel. The temple has several shrines both on the open and closed mantapas.

The temple town of Kanchipuram has many Shiva and Vishnu temples. The Ekambareshwara temple consists of tall tower and has AyiramkalMantapam built by the Vijayanagarakings consists of several dancing figures. Chidambaram temple is dedicated to lord Shiva. The structure is renovated by Pallava, Chola, Pandya, Vijayanagara and Chera royals in the 12th and 13th centuries. The gopurams on all the four directions have sculptural depiction of margakaranas. The east gopuram or the Rajagopuram is famous because of 108 margakaranaschiselled out in small rectangular panels along the passage that leads to the gateway. There are around fifty sculptures on each tower, with each repeating some portions from the other.

C. Temples from Andhra and Telangana



Fig -6: Veerabhadra Temple, Leepakshi

Temples of Andhra and Telangana experience a mixed style of architecture. These temple reveals the history and the patronage of dynasties like the Chalukyas, Eastern Gangas and the Vijayanagara kings. Several temples in this region project out the magnificent art forms that evolved over several centuries. The temple style includes the Chalukyan, Dravidian, Nagara and Odishan style can be seen in the structural temples of these states. The temples built during the early Christian era belonged to the Satavahanas and Ikshvakus era. Temples built in the North eastern part of Andhra Pradesh belonged to the Ganga Kings and reflect the Odisha style of

architecture. The thousand pillar temple built by Kakatiyas at Warangal is an excellent example of finest craftsmanship.

'Rudreshwara temple' or popularly known as 'The Thousand Pillar' located in the Warangal district has immense beautifully carved sculptures and pillars. The temple was constructed during 12th century by Rudra Deva of Kakatiya dynasty. Kakatiya artisans have shown their best chisel art to carve out beautiful sculptures. The star shaped platform, rock cut elephants and perforated screens are the characteristic features of the architectural pattern in the later chalukyan temples. The lintels, door jambs and niches in pillars and walls are decorated with beautiful sculptures, dancers and mythological figures. Tadpatri in the Anantapur district is a treasure house of temple sculpture. The temples of BuggaRamalingeshwara and Chintala Venkateshwara temples have large dance sculptures of deities in various postures making it a remarkable architectural style of the Vijayanagara dynasty.

D. Temples from Kerala

Kerala known as 'Gods own country' is rich in performing arts like Mohiniyattam, Kathakali, Kudiattam, Teyyam, etc. The temples have been constructed in a distinctive architectural style with unique features. The temple architecture known as 'Ambalam' is very different and distinct from other regions. The temples have been constructed in wood, stone and metals in simplicity and in distinct style. The temples have no scope for sculptures. However, temples like Anantha Padmanabhaswamy at Thiruvananthapuram has beautifully carved images including dancing figures on the hundred pillars on the pathway around the four sides of the temple. The mantapas also have stupendous carved out sculptures. Temples in Kerala also have nourished the art of mural paintings. The walls are beautifully coloured with paintings which add glory to these temples.



Fig -7: Venkittathevar Temple, Kottakkal

E. Temples from Odisha

Odisha, land of temples is renowned for its magnificent temple. Temples here follow the Indo Aryan Nagara style of architecture with distinctive features specific to this region. The landscape of the state is dominated by the tall temples. Temples from Odisha have main garbhagriha with several mantapas in front with pyramidal roofs (jagamohana), dancing halls (nata mandir), offering hall (bhog mandir). The well renowned temples across the state include Lingaraja temple and Mukteshwara temple at Bhubaneswar,

Jagannatha temple at Puri and Sun temple at Konark and Rajarani temple.



Fig -8: Sun Temple, Konark

The world-famous Sun temple at Konark is built by Narsimha Kesari I, is conceived as a gigantic solar chariot with twelve pairs of exclusive ornate wheels dragged by seven horses. The temple once had a giant shikhara over the garbhagriha. The jagamohana and the main sanctum stand on a same platform and detached nata- mandir in the same axis. Both the sanctum and nata-mandir have lost their shikharas. The temple as a whole is a treasure house of beautiful music and dance sculptures. The figures carved on the plinth are known as 'surasundaris' appear to be singing and dancing and playing various instruments. These figures are supposed to be taken from the classical dance form of 'Odissi'.

Bhubaneswar is celebrated for its temples. It is also known as temple city. The famous Rajarani temple constructed during 11th century is one of the most beautiful temples of Odisha and has vivid architectural carvings and sculptures on it. The temple is famous for its beautiful sculptures, unique architectural features, immense ornamentation and multiple scroll work. The temple has its unique style of architecture with a combination of nagara style and odisha style. The walls of the sanctum, particularly the lower half is beautifully decorated with slender nayikas gracing the walls. These nayikas have fascinating facial expressions, gestures and elastic body movements.

The construction of Mukteshwara temple dates back to 10th century and is referred as a transition phase between the early and later style of Kalinga school of temple architecture. Mukteshwara temple is dedicated to lord Shiva and is believed to be the crown of all the temples in Odisha. The temple is full of carvings and details with extravagant sculptures. The carving is a blend of Buddhist, Jain and Hindu style. The intricately carved entrance arch is a perfect example of Buddhist influence on the temple architecture. The temple is also famous for the ceiling having eight petalled lotus motifs inside.

Puri, one of the four dhams is the sacred place for Hindus. The Jagannath temple, also known as white pagoda is dedicated to lord Jagannath (Krishna), his brother Balarama and sister Subhadra. The architectural style is the traditional Odishan style of temple construction. The temple houses many sculptures indulged in different activities in different positions. The sculptures mostly have the influence of the traditional Odissi style, the mardala and parsvamardala – plying drums with arms crossed the chest in dola hasta. Apart from these, it has opened up the treasure of odissi – images playing flutes, holding mirrors and dancing in various

positions, chintanamudra all being beautifully carved and well presented.

6.MUSIC AND TEMPLE ARCHITECTURE

The sculptors from South India used their amazing skills to chisel rocks and shape them into musical pillars cum instruments. This art can be best seen during the Vijayanagara reign from 14th to 16th centuries. These pillars can be vividly seen in the temples of Hampi, Tadpatri, Lepakshi, Madurai, Algarkoil, Tirunelveli, Suchindram and Thiruvananthapuram. Hampi being the capital city of the Vijayanagara dynasty has a beautiful architectural wonder by the famous Vitthala temple. The temple is famous for its Musical pillared hall having fifty- six clusters of musical pillars of varying styles. Temples of Tadpatri near Guntakal and Lepakshi near Hindapur from Andhra region are beautiful and built in the Vijayanagara style. A temple at Thadikombu in the Dindigul district of Tamilnadu has beautifully carved pillars. The world famous Meenakshi temple at Madurai have the most interesting feature of thousand pillared mantapa. At the entrance to the hall, there are two clusters musical pillars.

The place of Algarkoil, 18 km from Madurai has a hall with fine sculptures and musical pillars both in fine conditions. Suchindram in the Kanyakumari district has a beautiful temple with musical pillars. The famous Anantha Padmanabhaswamy temple at Thiruvananthapuram is a temple dedicated to lord Vishnu has musical pillars.

7.MUSICAL PILLARS IN THE TEMPLE ARCHITECTURE

The fascinating and splendid musical pillars are found in the temples of Pampapati, Chowdeshwari and Vitthala temples at Hampi (Karnataka), Sri Anantha Padmanabhaswamy temple, Thiruvananthapuram (Kerala), temples of Lepakshi, Tadpatri, Tiupathi, Visakhapatnam (Andhra Pradesh and Telangana), Algarkoil, Kalakadu, Suchidram, Nallur, Tirunelveli, Madurai, Kanchipuram, Dindigul (Tamilnadu). There are two types of musical pillars found in the temples – 1) beating or tapping pillars and 2) blowing pillars

The tapping pillars produce different sounds in different tones by tapping with fingers on them while blowing pillars generate sound by blowing air through the holes just like wind instrument. It is believed that the stone that emits long and deep sound like a bell is known as male stone, the one which has long vibration like a brass vessel is a female stone and the ones which are uneven and rough are neutral stones. The stones for the pillars are generally three to seven feet long with circular cross section, sometimes square, rectangular, polygonal, octagonal cross sections. Few pillars are with carvings and few without. The ones with carvings add grace and beauty to the structure as a whole. The sculptors select the stone by tapping on it.

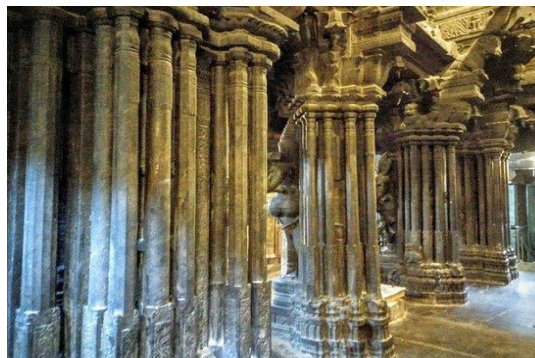


Fig -9: Nelliappar Temple, Thirunelveli

The musical pillars are classified into Shruti, Gana and Laya. The Shruti pillars produces basic notes of the swaras (sa, ri, ga, ma, pa, da, ni). Gana pillars produces notes of the ragas and Laya pillars when tapped produces taal(beats). Mani mantapam, near the nandimantapam of the Nelliayappar temple in Tirunelveli (Tamilndu) has giant pillars carved out of a single stone and have 48 sub pillars that produces musical notes when struck.

The musical pillars of the Thanumalayan temple in Suchindran, Tamilnadu are located opposite to the Bhairavarmantapam. A small pillar surrounded by the 24 sub pillars is located on the norther side and that with 35 pillars surrounding the centre pillar is located on the southern side. The pillar is shaped octagonal with a square base. It produces sound same as the Nelliayappar temple. Sri Anantha Padmanabhaswamy temple at Thiruvananthapuram, Kerala has 4 such tapping type musical pillars.

The Vitthala temple, one of the magnificent edifices is located on the southern banks of the Tungabhadra river at Hampi, Karnataka. It is the finest examples of the Vijayanagara dynasty. The unique feature of the Vitthala temple is the musical pillars on the mahamantapam. The mahamantapam of the temple has 5 pillars of 3.6 m in ht. 40 pillars are arranged to form an aisle and remaining 16 forms a rectangular court in the centre. The entire structure is made out of granite. The pillars when tapped produces melodious sounds. The pillars are of different size, shape, length and width. The pillars produces sounds of the Sapataswaras and of various instruments like Jalatarang, Tabla, Veena, Mridanga, Thavil, Ghatam, Damru, Ghanta naad, Shankha and many other percussion instruments.

8.SINGING ROCKS

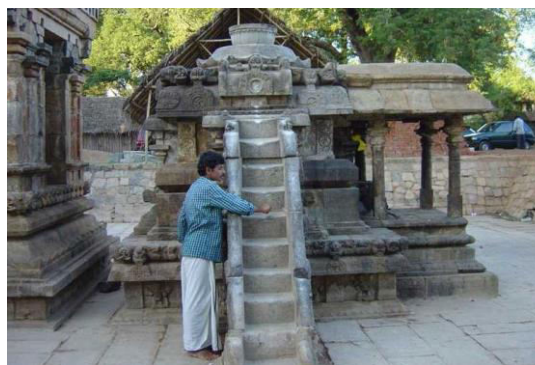


Fig -10: Musical Stairs, Darasuram



Fig -11: Stone Nadaswaram, Kumbakonam

Apart from the musical columns there are many other objects in the temple that produced sounds –

1. Musical Stairs –
Capital of the Chola kings, the city of Kumbhakonam, in the Thanjore district have many shrines in the vicinity. One can find the musical stairs at Darasuram. The sides of these stairs are beautifully carved. The 7 of the 8 stairs are not fixed to the ground when struck produces different tones.
2. Musical icons in stone –
The musical pillars are built by carving out the beautifully sculptured figures from the same granite stone. The icons of lord Ganesh and Garud in the Brihadeshwara temple at Thanjore, the icons of Rati and Manmatha in the Sri Vishnu temple at Shanbagramanallur and other sculptures found in the Krishnapuram temple of Tirunelveli district when struck their limbs produce the musical notes.
3. Musical icons in bronze-
There are musical icons cast in bronze similar to the stones. The bronze icon of the lord Vishnu at the Tirumangali temple, near Kanchipuram produces all the seven notes of the octaves when the statue's seven limbs are struck.
4. Musical pipes –
The musical pipe drilled through a stone pillar supports the roof of the Shiva temple at Shanbagaramanallur. The pipe is conical in shape. When blown sharply from the one end produces the sound similar to the brass blow pipe. The Sri Adi Kumbheshwara temple at Kumbhakonam has two Nagaswaram pipes made from soapstone. Pipe is 55cm long and has 17 cm brass mouth piece. There is also a stone pipe called Mukha Veena, still being used in the Sri Adi Nath temple at Alwartirunagari.

9. OBSERVATIONS

It has been observed that Indian temples had patronized different forms of performing arts. Indian arts are based on two based on two principles – Dynamic and Static. Dance, music and theatre are dynamic art forms while painting, sculptures and architecture are of static art forms. The Indian religion, culture and philosophies have blended these art forms and these art forms are unified substance overall. It can be seen that the art forms of dance and music

are projected and represented in the forms of paintings, writings, sculptures and architecture in the integration with space and time. Dance and music are the arts non-permanent in the context of time and space and the Rasika, the spectator is an integral part of the creative process of rasanubhava in the surroundings of divine or mundane; whereas paintings and sculptures are permanent but do not involve the rasikas in the process of creation. The creation of these art forms has a huge backing of the Natyashastra. It can be seen, felt and experienced how the life would have been at that time. The traditions of dance and music have been captured and reproduced with the help of artisans through paintings and sculptures. They began to use these fleeting movements and captivating poses in all possible ways allowing them to transform their rigid forms into the forms of flexibility, dynamism and improvisation which broken the monotony on the architectural space. Thus, dance sculptures are the embodiment of form, rhythm, unity, synthesis of structure and harmonized in the architectural space. It has also been observed that how the stones were carved out to produce the melodic sounds through fascinating pillars, stairs, pipes and bells. It can be observed that with the availability of minimum technology, the artisans had created great wonders that were much ahead of time.

REFERENCES

1. <http://ancientindianwisdom.com/culture-overview/indian-dance-and-other-arts> by ChoodamaniNandagopal
2. Musical Curiosities in the Temples of South India by H.V. Modak (Issue No. 04, Volume 14, Publication 01/01/1985)
3. The desi tradition as reflected in the dance sculptures of South India and Odisha – Chapter III (shodhganga.inflibnet.ac.in)
4. A rhythmic journey through time and space – A study of ancient South Indian dance and temple architecture – K. Chitralkha (MES College of Architecture, University of Calicut, Kerala, India) (Volume 04, Publication 01/02/2018, Proceedings of the International Conference on Arts and Humanities)
5. Musical pillars and singing rocks – M.G. Prasad and B. Rajavel (Noise and Vibration Control Laboratory, Department of Mechanical Engineering, Stevens Institute of Technology, Hoboken, New jersey, 07030, USA)
6. Dance and Music in Indian Temple Architecture by Sunil Shukla (Cyber Tech Publications - 2017)
7. Dancing Architecture: The parallel evolution of Bharatnatyam and South Indian Architecture by Kavitha Jayakrishnan (2011)