

Koothambalam - Traditional Architecture in Precarity

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Summary : *The architectural precarity of Koothambalams, the temple based location for Koodiyattom underscores the fact that shifting patronage for the arts can bring material precarity, even as it gathers a resurgence in following.*

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In Indian culture, music and dance played a crucial role in worship. Many traditional dance forms have evolved into refined masterpieces under the patronage of rulers and art lovers inside Indian temples. These performances provided education and enjoyment to the devotees as well. *Koodiyattom* is one such ritualistic dance drama still practiced in our state. The art form of *koodiyattom* has acclaimed popularity as the oldest living Sanskrit theatre in the world with a history of 2000 years. In 2001, it was included in the UNESCO list of masterpieces of oral and intangible heritage of humanity. Despite its growing popularity, there's an overlooked aspect – the exclusive theaters built in the past for staging these performances, known as Koothambalams. The term translates to the "temple of dance," with "koothu" meaning dance and "ambalam" referring to the temple.

The unique architectural marvel of koothambalams fascinated me, prompting a deeper exploration of their structure. A couple of them because of being part of landmark temple complexes are quite known but there are more than a dozen which remain somber. The present-day neglect of these structures raised my awareness as a conservation architect about the urgency to highlight the values associated with this unique form, meticulously crafted for its purpose. This article aims to uncover the historical and architectural significance of koothambalams as a unique typology of theatre architecture, emphasizing the crucial need for their conservation.



The Art and Architecture

To comprehend and value the architecture of koothambalam, it's essential to have a brief understanding of the art form it serves. The term "koodiyattom" translates to "acting together". Two or more actors narrate stories from epics to a small audience, using Sanskrit as the language. Historical records indicate that Koodiyattom has been staged in Kerala's temples since the 9th century. Learning and performing were traditionally confined to two communities, the Chakyars and Nambiar. The Chakyars, male actors, collaborated with the female members of the Nambiar community, known as Nangiars. The male Nambiar assisted with the percussion instrument, mizhavu (Paulose, 2006). Koodiyattom has a sophisticated acting technique, emphasizing facial expressions.



Figure 2. Koodiyattom performance at Harippad koothambalam. Image: Gopika Jayasree

In the initial period, the staging of koodiyattom used to take place in temporary platforms right in front of the temple sanctum or other spaces like oottupura, the dining hall. The act was primarily an offering to the deity and the audience was not allotted any specific positions to sit and watch the performance. As time passed by, the temple architecture and the associated functions kept on evolving and by 15th century, the temples of Kerala reached its

zenith with the much more elaborate pancha prakara temple scheme. *It is in*

influence the art form and its presentation.

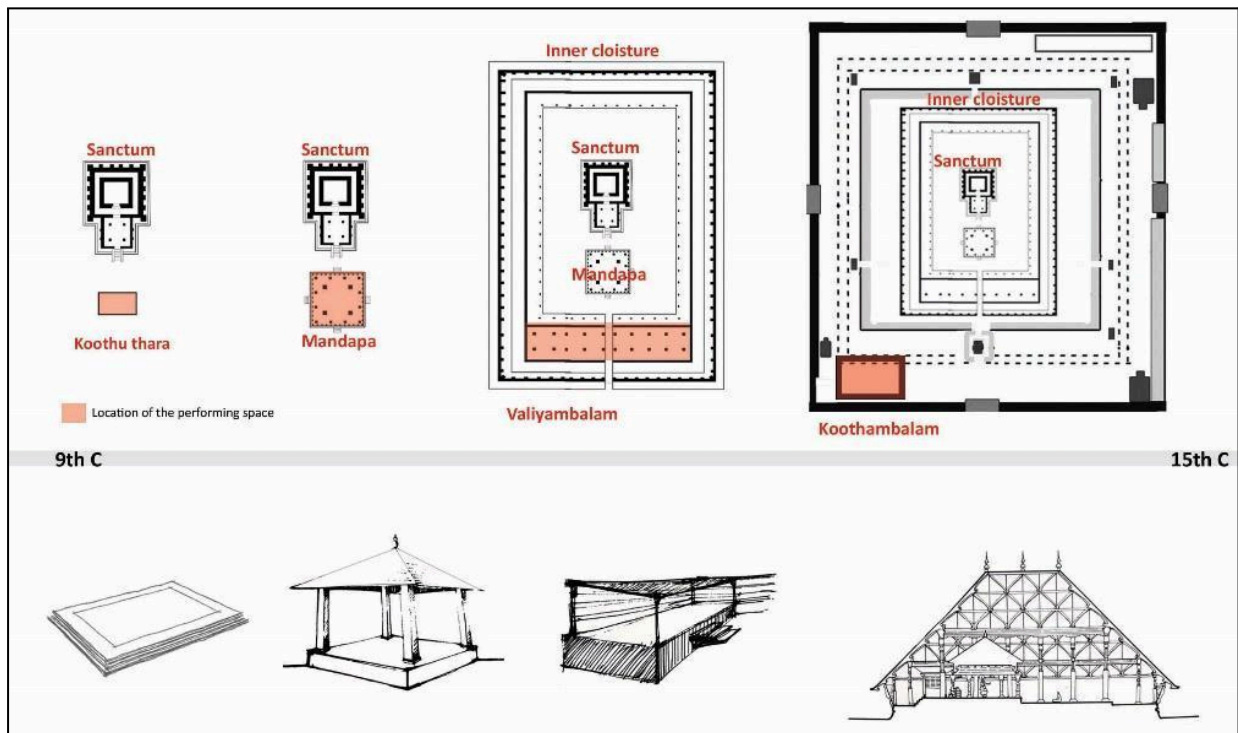


Figure 3. The evolution of performing spaces for Koodiyattom within the temple complex. Image: Gopika Jayasree

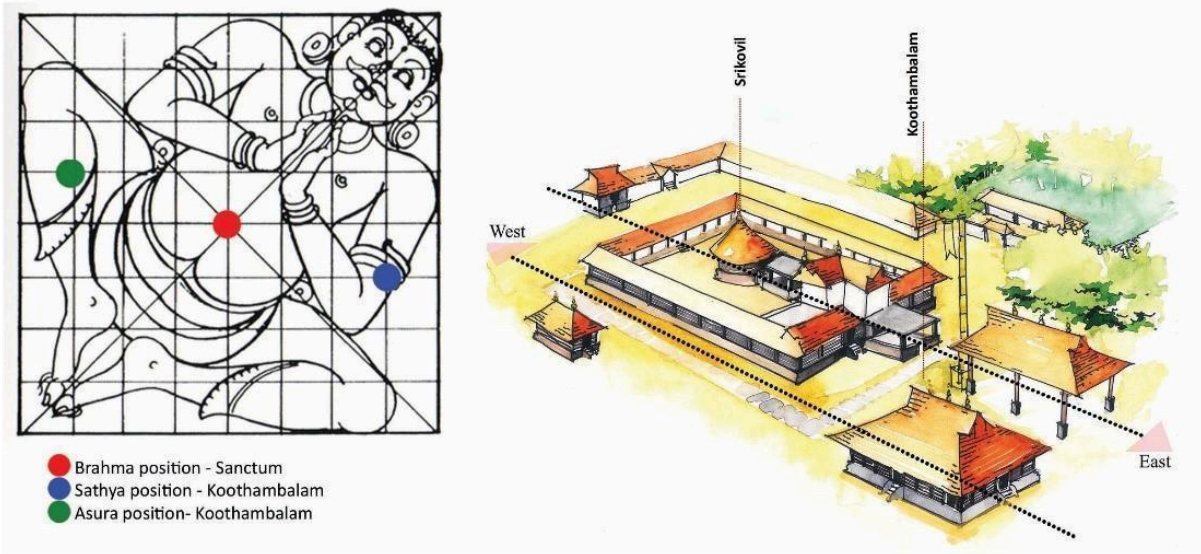
these panchaprakara temples that we see koothambalams- an exclusive venue for the staging of the ritualistic dance drama.

Here, Koothambalams are positioned in the outermost ring, in the immediate parallel axis to that of the sanctum. There are two possible orientations for the temple sanctums as per Vasthu Shashtra - east or west. Corresponding to the orientation of the sanctum, the koothambalam too can be oriented in two ways. For temples having east-facing sanctums, it will be west-facing and vice versa. With this orienting pattern, it is ensured that the actor, though not in direct proximity, always faces the deity in the sanctum while performing. In the 15th century, when the architecture of koothambalam was initially developed, it was guided by the structure of the art form. However, in subsequent periods, the architecture began to significantly

It is believed that the deity will be present inside the koothambalam at the time of staging. Thus, the sacred value associated with the temple theatre is equal to the sanctum. The time of performance proves apt for the staging as the dark surrounding adds to the overall ambiance of the staging in a dim flickering lighted lamp. It is also the time of the day when the surrounding noise level is the minimum.

Some existing Koothambalams

Geographically, the koothambalams within Kerala fall into two major groups. The northern group comprises the temple of Vadakunnathan at Thrissur at its centre and adjacent temples to its south and north within a 30 mile radius. South of Vadakunnathan are the temples of Peruvanam, Koodalmanikyam and Thirumuzhikkulam.



The koothambalams at these temples are reconstructions from the 18th and 19th Century. To the north are those at Guruvayoor, Kottapadi, Thiruvegappura and Panniyur. Of these the ones at Kottappadi and Panniyur are now extinct. The southern concentration of koothambalams are found in the districts of Kottayam and Allapuzha. This group contains those at Thirunakkara, Arpukkara, Thiruvarp, Kitangur, Harippad, and only the plinth at Chengannur. This list cannot be considered comprehensive as researchers still believe there are more archaeological remains of koothambalam in the state. *An onsite survey of thirteen koothambalams was extremely helpful to bring out the architectural similarities and most importantly the issues faced by them in the present day.*

Majorly, four periods of construction could be traced. The remains of the earliest ones found in the Northern region are from the 16th and 17th Century. The koothambalams found in the Southern region are mostly from the 18th century. The most elaborate koothambalams found in Thrissur are the reconstructions of 19th C. Two structures at Thirumuzhikulam and Thivegapura are the latest reconstructions in the 20th Century. At present, seven of the koothambalams are in occasional use. The other koothambalams which are in a

state of non-use are highly neglected. More than a couple of them are in a later stage of decay, totally abandoned and many are victims of unsympathetic additions and alterations. Figure 6 shows the geographical locations of the present day koothambalams.



a



b



c



d



e



f

Figure 5. Koothambalams - On site photographs, a. Koothambalam at Harippad b. Thiruvarp c. Irinjalakuda d. Kitangur e. Thirumoozhikulam f. Peruvanam (Need locations).

Images: Gopika Jayasree

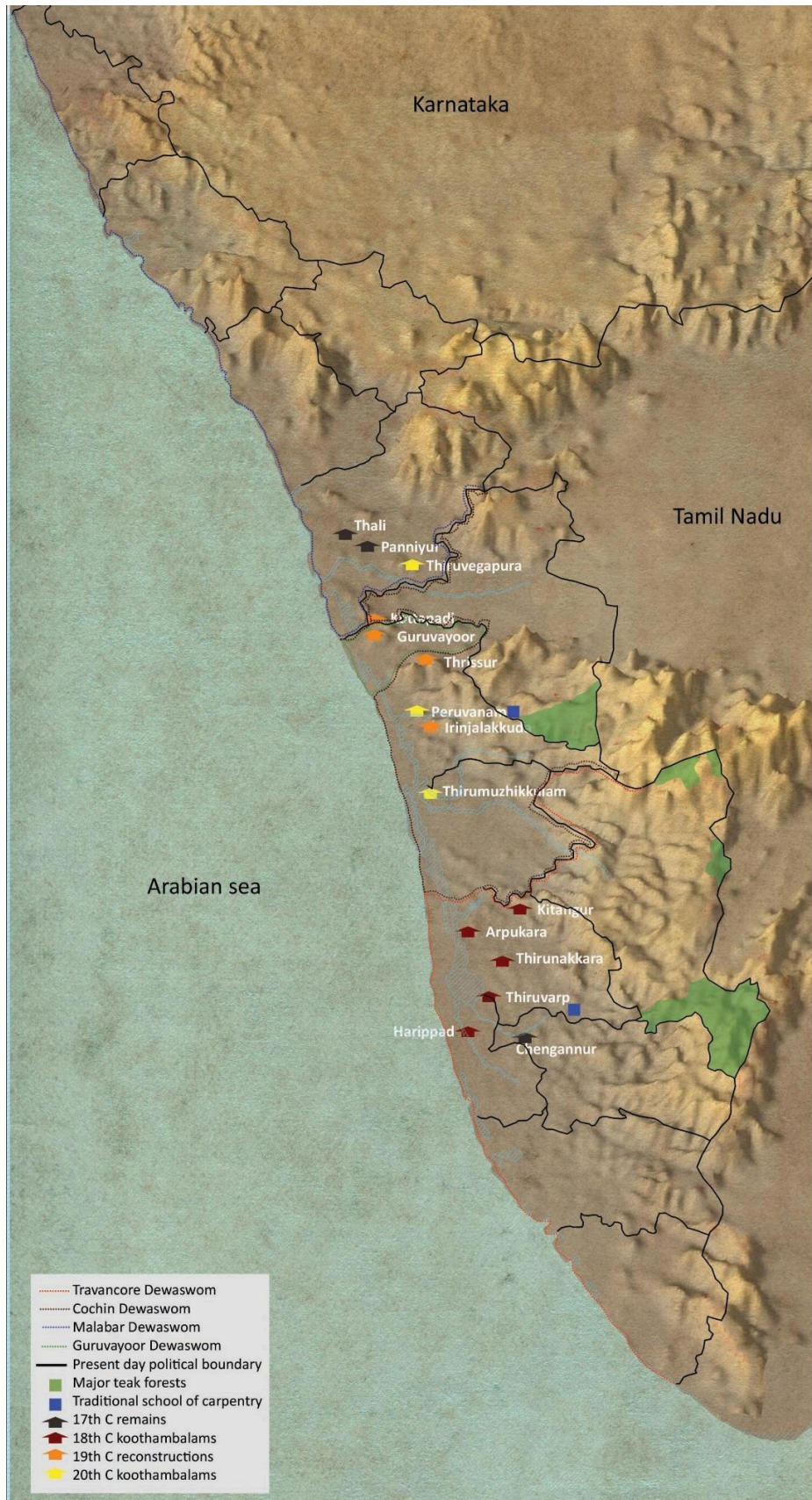


Figure 6. Map of existing Koothambalams. Image: Gopika Jayasree

The space

Koothambalams have a rectangular spatial layout, creating a spacious interior with a steep sloping roof (Panchal, 1984). While squares and circles are typically considered complete and sacred shapes in Indian temple complexes, the koothambalam structure deviates from this norm with its rectangular plan. This departure from the usual shapes could be due to the acoustical requirements of a theatre space.

The rectangular space inside the theater is divided into two halves – one for performers and one for spectators. The performer's half includes the rangamandapa (stage area) and nepathya (green room). The nepathya, located behind the stage, has two doors – one for entry and the other for exit. In smaller koothambalams, the nepathya may

extend to the sides. The rangamandapa visually frames the performing area, creating a defined boundary for the deity's visual sacrifice. The rangabhoomi, the raised platform supporting the roof, is marked by a Brahmamandala – a nine-coffered ceiling adorned with guardian deities and Brahma, the universal creator. The thirasheela, a traditional curtain held by two stage assistants, is a notable feature in Koodiyattom, covering the entire width of the rangamandapa.

Spectators sit on the floor on three sides around the central stage, collectively termed rangabhoomi. Separate entrances were designated for ladies, gents, and Namboothiris. Gents occupied the left half, ladies the right, and the immediate front portions were usually reserved for Namboothiris but now the ones who are

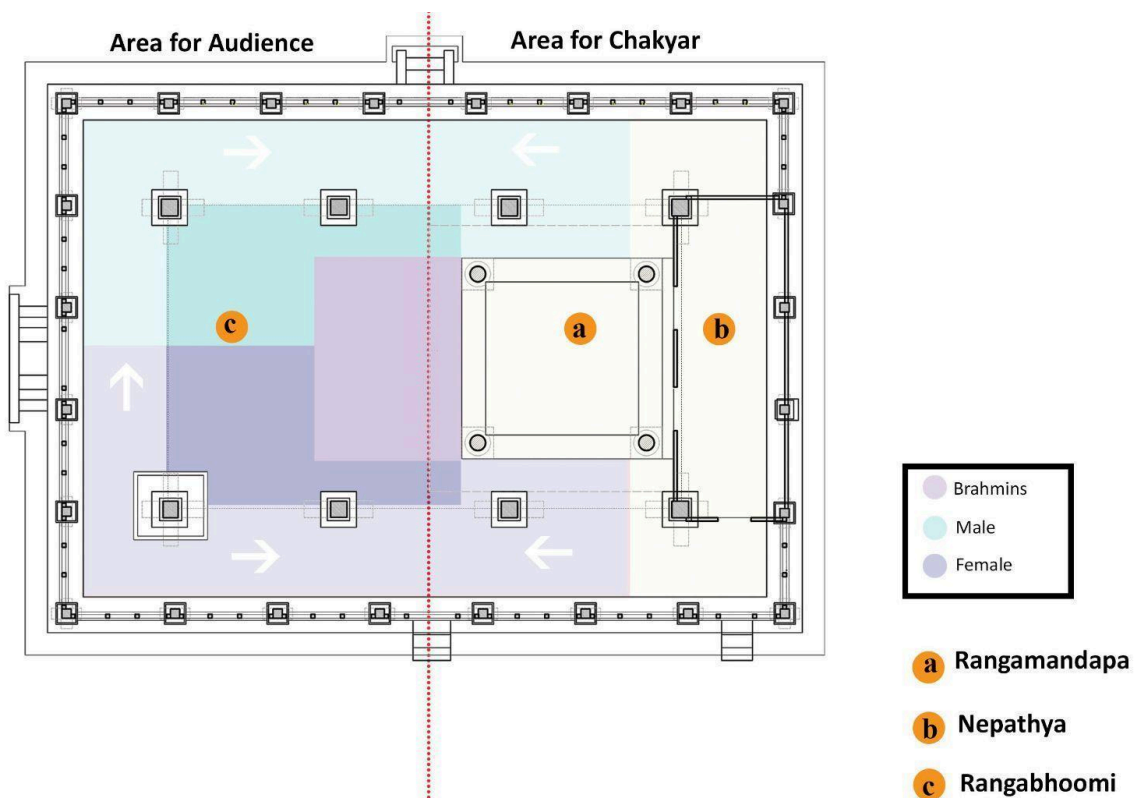


Figure 7. Koothambalam Floor Plan. Image: Gopika Jayasree

more interested in the performance take this place.



Figure 8. Rangabhoomi at Harippad. Image: Gopika Jayasree



Figure 9. Rangamandapam at Harippad. Image: Gopika Jayasree

The Built Form

The built form of a koothambalam can be divided into three main parts: a raised stone plinth, a superstructure consisting of two or three concentric rows of pillars, and a massive roof supported by these pillars. While the basic form remains consistent across all koothambalams, they are classified into three scales – Jeshtam (largest), Madhyamam (medium),

and Kanishtam (smallest) – based on their perimeter. Jeshtam koothambalams have a perimeter of 108 units, Madhyamam ones have 64 units, and Kanishtam ones have 32 units.

The determination of a koothambalam's perimeter follows the rules of Vastu Shastra, ensuring harmony with other structures in the temple compound. This prevents the koothambalam from overpowering or feeling out of place. Each koothambalam adheres to its own module, known as "pada," which helps establish proportions for its various elements. The pada value is calculated using mathematical formulas and is proportionate to the perimeter of the structure. This value governs every dimension of the koothambalam, from its length, breadth and pillar heights to smaller details like the height of the finial. These principles, often unknown to many, emphasize proportions that align with the golden ratio, contributing to optimal acoustics. The most fascinating and unique feature of koothambalam structure is its timber roofing. The steep slope and the resultant large volume make the structure highly susceptible to wind loading. To resist that, in between each rafters and horizontal ties, cross members of the same dimension as that of the rafters are kept. These members are termed as ottankoti kazhukol. They divide the whole space into series of triangular spaces and stabilize the structure.

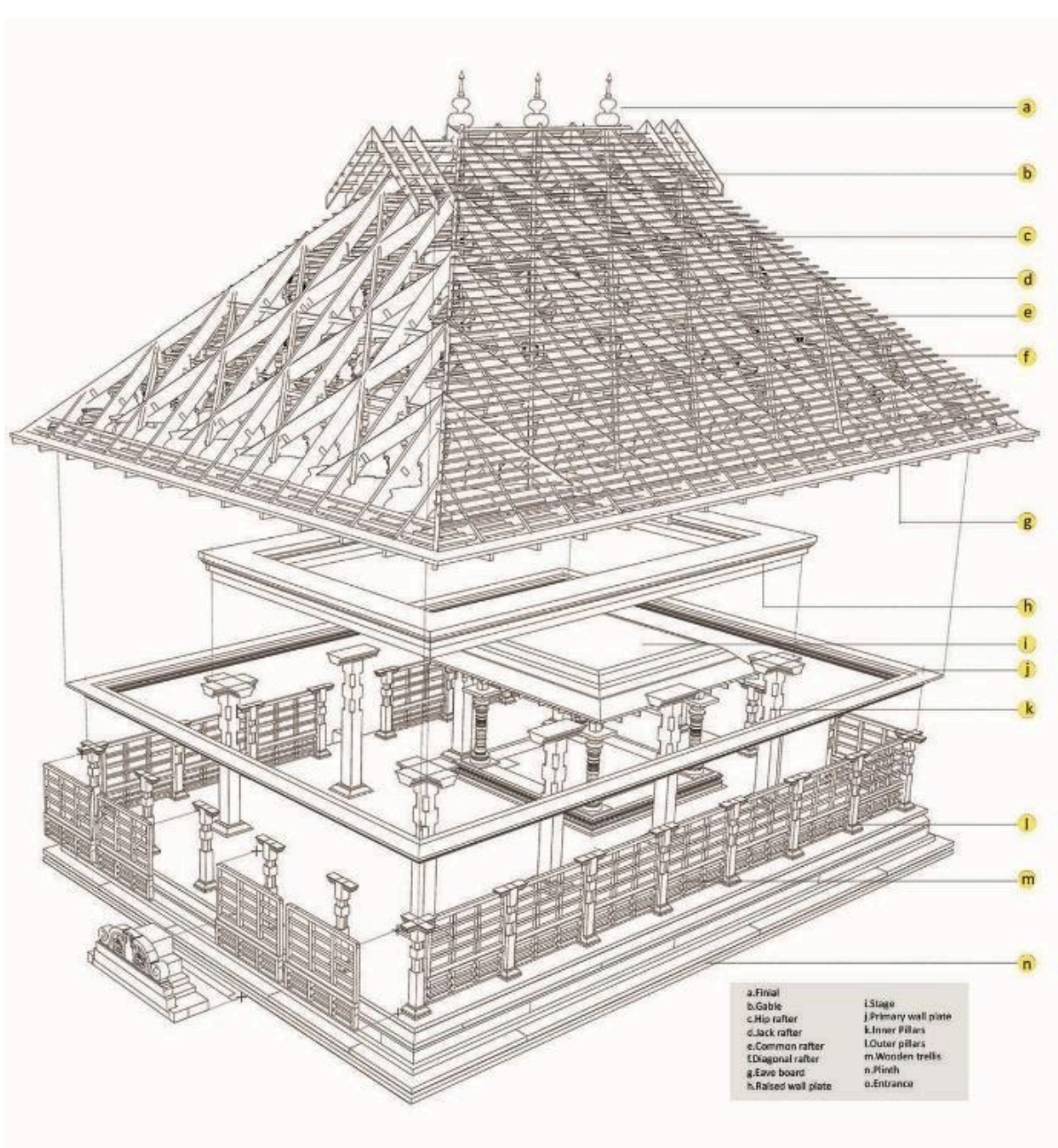


Figure 10. 3d render of the built form of a koothambalam. Image: Gopika Jayasree



Figure 11. Roof structure. Image: Gopika Jayasree

The spatial quality

Koodiyattom gives importance in conveying the aesthetic experience of *rasa* to the audience. The experience of watching a koodiyattom is quite enough to ignite in the audience a sense of devotion. Occasions where the spectators bow before the God being portrayed by the expert artist on stage are not rare. Much of the acting is concentrated on facial expression and hand gestures. The staging of koodiyattom used to happen in a time in history, where there was no option to amplify the human voice or light up the performing area. The architectural vocabulary of koothambalam structure responds cleverly to the limitations put forth too. The only light source used is a bell metal lamp which provides a flickering dim yellow light that lit up the face and upper body. Out of necessity, the actors concentrated their acting area near this centrally placed lamp. The proximity of the

spectator to the performer is a crucial factor which decides the essence of performance in this case. Even in the largest koothambalam, this distance is within 16 m, where one can clearly distinguish even the minute eye expressions of the Chakyar on stage.

The basic geometry and the detailing in the building parts add to the acoustical quality of the interior of a koothambalam. The effort to scatter and reflect the unamplified sound source is evident in the built form. In a high room volume, the unamplified sound will get lost unless special care is taken at the source itself. Sound is supported and strengthened by reflections from the low stage ceiling of the rangamandapa. The carvings in the ceiling are more of convex types which diffuses it and avoids undesirable hot spots. The irregular undulations formed by the rafters-planes, solids and lines in a 3d matrix helps in attaining maximum scattering. In a rectangular room, parallel surfaces cause sound to reflect back and forth across a space and it may cause excessive reverberation and undesirable echoes or flutter.

The wooden trellis in the periphery offers absorption and high degree of openness avoids any chances of flutter echo. Unamplified sound can be augmented by physically placing hard surfaces in positions where they can distribute sound to the audience. The pillars also offer hard solid surface in the sound path which facilitates scattering and helps in distributing it to the audience area.

Present scenario

In the present scenario, the fate of these unique koothambalams stands in stark contrast to their historical significance. While historical threats like wars with neighboring kingdoms in the 19th century

once posed great risks to Kerala's temples and koothambalams, about 14 of them managed to survive. However, the situation today has taken a different turn.

Koodiyattom, the art form for which these structures were originally built, has moved out of the temple complex. This shift was deemed necessary due to changes in social structures that once supported the art form. Outside the temple compound, artists gained more freedom to experiment, resulting in significant changes in the repertoire of koodiyattom. Unfortunately, the once celebrated koothambalams are still undergoing the test of time! Many have fallen into a state of disuse, lacking maintenance and care. Un-informed additions and alterations are causing loss of the historic fabric and authenticity in many places. Most of these timber structures are gradually deteriorating, succumbing to heavy monsoons, beetles, and borers.



Figure 12. Interior, Thirumuzhikulam
Image: Gopika Jayasree



Figure 13. Interior, Thiruvarp Image: Gopika Jayasree



Figure 14. Condition of timber rafters, Thiruvappu. Image: Gopika Jayasree (taken in 2016)

A Call for Change

The Chakyar community, traditionally associated with koodiyattom, has dwindled, with a very less number currently practicing the art form. Even though koodiyattom is now learned and performed by individuals from various castes, an unwritten rule persists in many koothambalams, that only Chakyars have the right to perform inside. Despite

efforts from the artistic community to address the underutilization and disconnection of koothambalams from their original purpose, significant social changes take time to materialise. There's a growing realization that the best way to conserve these spaces is to revive their intended purpose. Before considering adaptive reuse, there is a call to explore the option of utilizing koothambalams for their original function, thus preserving their cultural and artistic heritage.

Preserving timber structures, especially those with intricate roofing systems, is a challenging endeavor that requires a collaborative effort. Successfully conserving such structures entails the expertise of skilled craftsmen, the procurement of matching timber and traditional materials, coordination among knowledgeable architects and engineers, and significant funding to facilitate the entire process.

Previous architectural conservation initiatives have been undertaken at Koothambalams in Vadakumnathan and

Guruvayoor by dd Architects, as well as at Koodalmanikyam by the Archaeological Survey of India (ASI). Ongoing efforts, fueled by crowdfunding, are directed towards the conservation of the Koothambalam in Harippad. These endeavors emphasize the importance of preserving not just a few, but each of these architectural masterpieces.

In the present day, conventional theaters often appear out of place within contemporary performance spaces. The architectural principles, spatial layouts, and construction details found in koothambalams offer valuable insights for shaping future theaters dedicated to traditional arts. It is crucial for responsible architects, art enthusiasts, and historians to awaken to the need for safeguarding these distinctive temple theaters – documenting and conserving them. Beyond serving as reminders of the past, these spaces carry significant educational value for future generations.

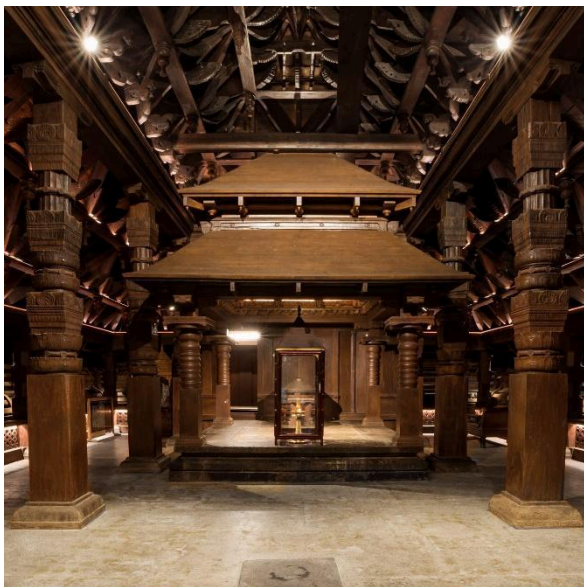


Figure 14. Koothambalam at Guruvayoor after conservation works. Image: Gopika Jayasree

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