

Indigenous Architecture of Sri Lanka

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Introduction

Architecture produced by a civilization dignifies that civilization. Architecture forms a depository of artistic capabilities, beliefs, and aspiration of the people who created it, including their technological achievements and influences they faced during different periods of history, and many more information. Any historic building is like a book, which can be read as chapters that describe the different aspects of society that created and used it. In every civilization architecture reflects the pride of that civilization or society. Sri Lankan architecture can be looked at under three headings; religious architecture, secular architecture and architecture of the peasants. Religious architecture was created to last long, and represented the glorious creative components. The other two types covered the dignified creations of royal

palaces, residences of the elite, public buildings and different types of peasant houses. It is interesting to note that on the long continuation, and in their chronological development, architecture has shown different achievements through historical periods, and the resultant influences are exhibited in their architectural expressions. Indigenous architecture in Sri Lanka had continued and survived for more than two thousand two hundred years, the remains of which are seen in many edifices constructed during the different historical periods of the country. The profession of architecture in Sri Lanka was considered so important and special that compilation of text books on architecture, took place explaining architectural theories, principles and practices that were exercised during different periods. The Silpa text “*Manjusri Bashitha Vastu Vidya Sastra*” was one of the important architectural texts

compiled in the 5th Century AD. This architectural text gives a complete description of designing and setting up of Buddhist monasteries, and to ascribe a spiritual standing it was dedicated to Bodhisatva Manjusri. This book gives an explanation of each and every building type found in a Sri Lankan Buddhist monastery, their building forms, settings and layouts. It gives an account of the five important sacred buildings found in a Buddhist monastery, namely the stupa, image house (*pilima yage*), Bo tree shrine (*Bodhigbara*), chapter house (*Upastagbara*) and



Ambekke ketayam

meeting hall (*Sabha*). This book has given a description on every type of building. As an example, it says, stupas can be built in seven different shapes, namely, the bubble shape (*bubulakara*), pot shape (*ghatakara*), the shape of a heap of paddy (*dhanyakara*), bell shape (*ghantakara*), shape of a Nelli fruit (*amalakara*), the lotus shape (*padmakara*) and onion shape (*palandwakara*).

These text books provided not only information about plans, layouts, knowledge etc., but also the religio-cultural beliefs that transcend the theories that give rise to the spiritual affiliation of the building. Without this architecture silpa text, it would not have been possible to explain and understand the unique features of monastery buildings found in Anuradhapura.

Sri Lanka's indigenous architecture is composed of many facets that include traditions, their response to the climate, use of available material in the locality, design and creativity, aesthetics, proportions and composition, use of topography, rocks and boulders, response to water, astrological beliefs and to religio-cultural practices. In addition to the utility value of the building and prosperity of the user, durability and aesthetics were given priority. An architect was also considered as a priest knowledgeable in conducting rituals during construction. The architect had to be well conversant with carpentry, masonry, building materials, construction technology and astrological beliefs. It is the

tradition that God Viswakarma is venerated as the guardian deity of all creations, design, crafts and construction. Therefore any work of high standing is considered a divine product created with the blessings of God Viswakarma. Architecture was taught in the tradition of knowledge transfer from master to pupil (the *Gurukula* tradition), and was mostly confined to a special guild



Nelum Pokuna

or caste. The architect learned his profession through apprenticeship closely associating or working with the master and also following the silpa texts.

The most significant influencing factor in the development of the architectural history of Sri Lanka was the formal introduction of Buddhism by Emperor Asoka of India in 247 BC. But the ancient city of Anuradhapura was designed on a drum (*mrdanga*) plan, and was not of Aryan origin, but by those who inhabited the country when Aryans arrived in Sri Lanka in the 6th century BC. Further, there are also large numbers of pre-historic cyst burials constructed using large stone slabs enshrining ashes of the dead, and there are many cave dwellings with cut drip ledges at

the top to avoid water dripping in to the cave.

Architecture of Anuradhapura Period

Ancient city of Anuradhapura served continuously as the capital of Sri Lanka for more than thirteen hundred years up to the 11th century AD, and the city was dominated with a large number of religious and monastic buildings. Within three centuries following the introduction of burnt clay brick technology to Sri Lanka in the 3rd century BC, the Sinhalese built the tallest brick structures in the world, the stupas. These are sacred buildings enshrining corporeal relics of the Buddha, and comprising a solid dome built on a podium paved out of square stones, terminating in a cubical masonry superstructure at the summit and a central spiral with a pinnacle terminating in a cut gem acting as a lightning conductor. There are large stepped entrances to the podium located on four cardinal directions facing four altars that are decorated with beautifully carved animal, floral and geometric patterns.

A stupa forms the dominating architectural edifice of a monastery, and the height of the dome varied from 2 to 150 meters. The monasteries in Anuradhapura were large universities. For example, Jetavana and Abhayagiriya had about 5000 monks resident in each, while Mahavihara and Mirisavetiya had about 3000 monks each. These



Mirisavetiya

had well designed layouts with two storey for monks residences, image houses, congregation halls, kitchens, refectories, hot water baths, hundreds of drinking and bathing ponds and many other buildings to meet monastery requirements.

Sigiriya, the landscaped fortified city established in the 5th century AD, dominated by the royal precinct built in association with a 200 meter large rock out crop, is a unique creation, and today it is a world heritage. Sri Lankan architecture is mostly landscape driven architecture, composed of an organic format in relation to an axial arrangement, associating levels in the topography, natural boulders, rocks, flights of steps, ponds with different configurations, flowing water, shaded with large varieties of trees and plants. Sigiriya is more or less a pleasure park designed for royalty, conceiving and ensuring as far as feasible the concepts of scientific conservation of the natural environment. The rock surface on the west carried the largest mural ever done by man. It covered an

extent 100 meters by 30 meters in surface area with beautiful paintings of more than 600 royal ladies. The Mirror wall at Sigiriya covering the steps along the rock surface that was built 1500 years ago, continues to remain with a reflecting surface even after it had been exposed to sun and rain for such a long period. This Mirror Wall is covered with hand written poems adoring the beauty of the painted damsels and the surrounding vista, thus stamping the hand writings of thousands of visitors who had came to Sigiriya, from the 6th century to 14th century AD.

The Vessagiriya Monastery and Ran Masu Uyana, the royal pleasure park at Anuradhapura are excellent creations of the same King Kasyapa who built Sigiriya integrating the landscape, water resource and the built environment. As part of the architectural tradition stone carvings and mural paintings were used as decorative elements in all religious and secular buildings. The decorative concept in architectural work starts from the semicircular stepping stone of the entrance known as the Moonstone, and carried through a flight of steps, balustrades, columns, column capitals rising up to the pinnacle fixed on top of the ridge tiles placed on the roof.

Architecture of the Polonnaruwa period (11th to 12th Century AD)

The two centuries of the

Polonnaruwa period is full of architectural edifices inclusive of great stupas, image houses, the Temple of the Tooth Relic, and palace buildings etc. Unlike in Anuradhapura, Polonnaruwa had a large number of brick structures, which still stand exhibiting the scale and magnificence of their achievements. Badda simapasada was a monks congregation / residential building comprising twelve storeys, while Parakramabahu palace was of seven storeys. Architecturally these were timber framed buildings clad with thick brick walls in the lower floors. In most of these buildings large number of stone columns in the ground floor carried the load of upper timber floors and the roof. The tall brick built image houses like Lankathilaka, Thivanka and Thuparama had vaulted roofs made out of bricks, while the taller inner walls were structurally buttressed with another thick outer wall leaving a perambulatory path in between, which was lit with windows on the outer wall. In Lankathilaka, the two front circular pillars were constructed slanting towards the centre, to display an exaggerated optical illusion of height. The outer wall surface of all these buildings were decorated with brick and stucco sculpture on bas relief forms, composed of rows of animals and *vamanas* or dancing dwarfs. The upper areas were decorated with compositions of rhythmic figures of gods and Bodhisattvas within architectural formats called

vimanas. All these were beautifully painted in white, yellow ocher, and red ocher. Interior walls in these buildings are covered with rows of mural paintings depicting Jataka Stories and episodes from Buddha's life. In Thivanka, such paintings are still preserved to a great extent.

The Tooth Relic temple square at Polonnaruwa was composed of many important buildings constructed in stone and brick. A Vatadage is a stupa house built in the 12th Century AD by Parakramabahu I and renovated by Nissankamalla. It is a circular building with beautifully carved stone flights of steps at four cardinal directions, and decorated stone balustrade round the building. There are three sets of stone columns placed in concentric circles around a small stupa with four large stone Buddha images facing the four cardinal directions. The conical roof of this building was lost with time. Nissanka Latha Mandapa was a pirith chanting hall with decorative stone columns carved in a rhythmic lotus stem pattern. In front of the vatadage are two stone buildings built by two kings to house the sacred Tooth Relic of the Buddha.

City Planning after Polonnaruwa.

After the 12th century AD, the architectural pattern had changed. There were three capital cities with royal residences designed and built in association with a large rocky hill with the palace complex

placed on the unpenetrable hill, while the city itself was protected with concentric city walls and moats for defense purposes. The Kingdoms of Dambadeniya, Yapahuwa and Kurunegala were designed on the concept of defense named as *giriidburga* in traditional city planning.



Sigiriya

Architecture of the Gampola Period

During the Gampola period (1341 - 1391 AD), a new concept of a temple-village landscape planning process was seen. The village was planned around an important temple, with the village layout comprising houses for a large number families along the main street who served the temple. Here paddy fields were also allocated to each family in consideration of their service. These temples were designed to combine both Buddhist and Hindu Shrines. In Lankathilaka and Gadaladeniya, the Buddhist image house was dominant with a smaller Hindu Shrine. In other temples like Embekke, Viegiriya, Soragune, Ukkal Aluth Nuwara etc., the Hindu Shrine was dominant while the Buddhist image house was smaller.

The Lankathilaka image house at Gampola had the same brick built architectural style as found in Polonnaruwa, with a vaulted roof. A hundred years later it had been found that the construction materials used here was not suitable during heavy rainy weather, and hence they were covered with a complex tiled roof. Gadaladeniya image house is a stone building constructed with a South Indian temple architectural tradition under the guidance of an Indian architect. It has a larger domical roof above the Buddha image shrine and a small dome above the Vishva shrine. This stone building was also later covered with a tile roof. Embekka Dewala has a two storey shrine dedicated to God Kataragama with a timber colonnade open mandapa building functioning as the drumming hall in front. It is an important example of timber architecture with beautifully carved timber columns and a dominating decorative timber roof. Vegiriya is a cave shrine housing clay images of Avalokiteshvara, Natha and Goddess Tara, now named as Biso Bandara. The floor and the rock ceiling is lime washed in white with independent statues placed in the middle creating a beautiful spiritual space. The timber door of this shrine is beautifully carved with floral and animal patterns, while a small Buddhist Shrine is placed on one side of the drumming hall found in front. Gampola architecture is a product of the socio-cultural complexity of the people resulting from a strong South Indian influence.

The Kandyan Period

Even though the royal capital was shifted to Kotte, closer to western coastal belt of the island supporting a strong political stability, no architectural remains have been found due to the destructions caused by the Portuguese. With the establishment of the Kandyan Kingdom in the 16th Century AD, a new culture in Sri Lankan architecture emerged. The artisan families who were serving the king during Gampola period were living in the Kandyan region, continuously practicing their crafts. Later they would have served the Kandyan Kings. The Kandyan period architecture was folk based in nature, smaller in scale but refinedly decorated with paintings and carvings. This decorative quality was seen not only in buildings, but extended also to furniture, house hold items and kitchen utensils.

Among the religious buildings found in the city of Kandy and in villages of the Kandyan Kingdom, are the image houses that continued to exist as important buildings. There are three major architectural types that can be identified here.

1. Cave temples – Natural caves with a drip ledge cut along the top edge of the entrance and extending the space by adding verandas, are found placed with seated, standing and reclining Buddha images. Some of these were renovations of the Anuradhapura or Polonnaruwa period Shrines. A Makara Thorana

is found above the entrance doorway, or sometimes a Makara Thorana was found built as a backdrop to the seated Buddha image placed on a central pedestal. The interior walls and ceiling of these shrines were beautifully decorated with mural paintings depicting Jataka stories based on the previous births of the Buddha and different episodes of the Buddha's life. Among these, the cave number three in the World Heritage Site at Dambulla with a



Watadageya

large number of Buddha images and paintings, is considered special. This was done in the mid 18th century parallel with the other Cave Shrine made during early periods.

2. Image Houses. These are solid buildings built on a raised plinth with clay or clay rubble walls. These buildings were covered with a timber framed flat clay tile roof with long eaves. Among these buildings the Gangarama image house at Lewella is very special. It has a seven meter high standing Buddha image carved out of a living rock and enclosed within tall thick clay rubble walls. A low level verandah

with stone columns and a half wall covered three sides of the shrine, while other side remained with the balance part of the rock formation. The lower section of the inner walls up to eye level is decorated with paintings depicting different episodes of Buddha's life and Jataka Stories. Upper parts of these walls are filled with paintings of seated Buddha images drawn within hundreds of quadrangles and the ceiling is also decorated with paintings.

Small image houses in village temples were mostly constructed by the villagers under the patronage of a local chieftain. Clay walls of these small shrines were constructed on a plinth with a front verandah, which was used as a drumming hall during the performances of rituals and festivals. The inside wall facing the entrance door, formed the backdrop to the main seated Buddha image. On either side along the side walls were two standing statues of the Buddha and two standing statues of Gods Saman and Upluwan or Vishnu and Kataragama. Walls are decorated with mural paintings of Vessantara Jataka and different episodes from Buddha's life. The ceiling is decorated with lotus floral and geometric motifs. Thick timber door sash is pivoted and fixed with beautifully decorated iron ironmongery inclusive of a large metal door key.

3. The third type of the image houses that were built in rural settings of the Kandyan Kingdom were raised on timber platforms supported on short or tall stone

columns, timber columns or stone boulders, are identified as Tampita Vihara or temple on pillars. These are either square or rectangular shaped in plan. The buildings with a square plan had a front verandah and sometimes with a narrow verandah running round the shrine. Square shrines are constructed with about two meter tall pillars. In linear buildings the front verandah is much longer and was used as a drumming hall. In some buildings, there is a separate mandapa or a columned hall constructed at a later date. Inside thus Tampita Vihara building was also found a seated principal Buddha image with two standing images of the Buddha and two guardian deities. All interiors are decorated with paintings. Some of these two storey structures are climbed with a steep timber stair case.

The Temple of the sacred Tooth Relic found in the Kandy Palace complex is a very special building developed on a two storey Tampita Vihara proto type. This special shrine housing the Tooth Relic is placed on a court yard of another set of two storey buildings of the temple complex. It is a rectangular building with a raised decorated stone plinth with a stone columned verandah set along stone steps in front and on two sides. All three large door frames are in stone and are finely decorated with carvings of floral and geometric patterns. The Kandyan period moonstones are found placed at the entry point of all three flights of steps. The upper timber floor is climbed

through the front hall in front of the storage chamber called *aramudala*. This floor comprises a front open hall in front of the inner shrine that houses the Tooth Relic. There is a Verandah round this building with decorated timber columns supporting the long eaves of the roof.

This building is architecturally very special because all constructional materials used in Sinhalese Architecture have been used in structural and decorative forms. In stone it has a moulded plinth and carved columns, decoratively carved door frames in timber, carved and turned out pillars, carved beams and brackets, carved roof timber as rafters. Architecture includes the use of all construction metals such as iron, brass, silver and gold to decorate the building. The turned out balustrade pillars were decorated with lac in yellow, black, red and green. Door frames and sashes in the upper floor are decorated with carved ivory and elephant bone panels. Clay tiles used are moulded with design elements. All the columns, beams, brackets, ceiling panels, door sashes and walls were decorated with paintings depicting each and every design element in Sinhala art. The centre shrine or the Vedahitina Maligawa is a unique building in Sinhala architecture. Among the palace buildings the audience hall is a very special timber building. It is of the same plan form as the council chamber that had continued down from Polonnaruwa period. It is a linear building with a raised moulded

plinth, and 68 carved tall timber columns in two double rows with a wider center space. The heavy timber structure of the double pitched roof is placed on decorated cross brackets on top of all columns. The large heavy roof with long eaves is clad with flat clay tiles and two brass pinnacles at the ends of the top ridge.

The importance attached to the Kandyan period architecture is to realize the fact that this was last link of the Sinhala civilization before British took over the country in 1815. The significance of the traditional religious architecture is to understand the consideration given to the philosophy of living with the nature, climate and the environment. It must be further emphasized that apart from the simplicity in their design and use of available construction materials, they adopted a culture of maintenance and conservation of architectural patterns by repetition. The changing values among the upper strata of the society in neglecting cultural values and traditions, and the acceptance of European values influenced by the western model of educational systems, had not only changed Sri Lanka's unique indigenous architecture, but also the way of life of the people of this country.

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