Studies in South Indian Architecture
(with special reference to Kerala & Tamil Nadu)
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Edited by: K.G. Sreelekha
Studies in South Indian Architecture
(with special reference to Kerala & Tamil Nadu)
Samīkṣikā Series
No. 7

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The Samīkṣikā Series is aimed at compiling the papers presented by the various scholars during the seminars organized by the National Mission for Manuscripts. The seminars provide an interactive forum for scholars to present to a large audience, ideas related to the knowledge contained in India's textual heritage.

In keeping with the title, the Samiksika (research) Series is concerned with research papers of distinguished scholars and specialists in different intellectual disciplines of India.
Studies in South Indian Architecture

(with special reference to Kerala & Tamil Nadu)

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K.G. Sreelekha

National Mission for Manuscripts
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Contributors
Preface

The Oriental Research Institute and Manuscripts Library is a department of the University of Kerala which was originated in the year 1903 by the Maharaja of Travancore, His Highness Sri Moolam Tirunal in order to edit and publish the manuscripts of the Royal Palace. Since then it grew in its magnitude and importance by the fosterings of the different Maharajas of Travancore who were patrons of art and literature. The department became a part of the University when the University of Travancore was established in the year 1937. Now our collection has in total above 65,000 works; 80% of which are palm-leaf manuscripts. Others include Agarutvak, Bhurjapatra, Copper Plates and paper manuscripts. The collection found in this department is the second largest in our entire continent. It covers every field of human wisdom like Veda to Mimamsa, Nyaya, Kavya, Rupaka, Campu, Tantra, Mantra, Astronomy, Astrology, indigenous systems of medicine, Physics, Chemistry and even complicated forms of Trigonometry. Most of the works are in Sanskrit, others include Malayalam, Tamil, Bengali, Marathi, Gujarathi, Kannada, Telugu, Oriya etc. The scripts include ancient scripts like Nandinagari, Grantha, Brhami, Vattezhuthu and others like Deveanagari, Marathi, Telugu, Oriya etc.

The Department now performs multifarious functions such as academic activities—the department conducts M. Phil Manuscriptology Programmes, teaches ancient
scripts to Post Graduate students of other faculties as elective subjects. Also the collection of manusriputus is an ongoing process in the department. We collect, catalogue and preserve them for the posterity. We also publish the manuscripts on the basis of their importance and demand from researchers. The Ph.D theses of this department are mainly critical editions of unpublished manuscript from our collection.

From the last quarter of 2003, the very year of its establishment, the National Mission for Manuscripts rejuvenated this department by giving its helping hand. Since then, this institution has gained the status of a Manuscripts Resource Centre and recently, in 2011 it has been declared as a Manuscript Conservation Centre also by the National Mission for Manuscripts. With new speed, we are moving towards our aim being consolidation and preservation of the textual heritage of our past for the posterity. We conduct surveys, catalogue and collect manuscripts, provide awareness programmes, conducted classes on paleography and preservation, help private repositories in preservation of their collection as part of the Manuscripts Resource Centre and Manuscript Conservation Centre Projects.

Since the year 2010, National Mission for Manuscripts has started helping us more in academic activities by organizing national seminars through which we are reaching out to the public more effectively by bringing into light our treasure house of knowledge. Through these seminars, we are giving emphasis to our unpublished works in a particular/specific area. The National Seminar on Manuscripts related to Architecture sponsored by the National Mission for Manuscripts is the second in the series of National Seminars. The contribution of Kerala to the field of Architecture is remarkable whether it be temple, dwelling house or huge building. Our main objective is to bring to light our collection of unpublished work related to traditional architecture and
bring an awareness to those who are related to the field of architecture so that they can incorporate the advantages of ethnic style into the present constructions as demanded by modern society. The papers which were presented in the Seminar and were subjected to discussions and deliberations have been strung together with utmost care in this collection. They are mostly based on the ancient rules, principles and techniques of building making; some papers could penetrate into the most modern techniques of architecture also. Hope this work would open up new dimensions in the field of Architecture.

DR. K.G SREELEKHA

14th November, 2014

Project Co-ordinator ORIML MRC & Prof. & Head, ORI & Mss. Library,
University of Kerala, Kariavattom
Foreword

Manuscripts in India go back a long way in history with centuries of different writing cultures and practices making their way into the textual traditions of the country. This pluralism in experience, thought and practice has led to the flowering of diverse manuscript traditions reflecting various canons of critical thinking and historiography. To promote research and interest in Indian knowledge systems with particular emphasis on manuscripts, the Mission organizes national level seminars. Scholars specializing in various fields are invited to present research papers which are eventually published by the Mission under the title Samikshika. The objective is not only to know about the existing information and practices about manuscripts but also to bring to light relatively unknown knowledge. The Mission then tries to develop and incorporate these insights into its activities.

The current Samikshika volume presents the proceedings of the seminar on “Studies of Indian Architecture in Kerala and Tamilnadu.” The seminar was organized in the Oriental Research Institute & Manuscripts Library, University of Kerala under the supervision of Prof. K.G. Sreelekha, Project Coordinator and Head, DRI & MSS Library.

Different types of architectural styles showcase diversity of expressions. This volume presents the South Indian School of Architecture specially in Kerala and Tamil Nadu and covers Temple as well as Building Architecture. The architectural content in the Works of other disciplines like
Arthaśāstra and Nātyaśāstra have also been discussed in the respective papers.

This volume should prove quite useful to the readers in general. I wish to thank to the scholars who have presented the papers and also to the publisher, Dev Publishers & Distributors for bringing out this volume.

DR. SANGHAMITRA BASU

New Delhi Co-ordinator Research & Publication
24th December, 2014 National Mission for Manuscript
# Key to Transliteration

| VOWELS | | | | | |
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अ: *No exact English equivalents for these letters.*
The Indian temple of which the temples of Kerala, form the microcosm, is by unanimous verdict, the product of Indian religion and philosophy. “The mystics of India, reconciled the aims of the artist and philosopher,” as E.B. Havell puts it, and with great power of technical expression, took the monumental art to “the loftiest heights ever yet attained by human thought.” For this attainment, the Indians adopted a scientific and mystical framework or scheme as delineated in the Agamic and Nigamic or Tantric texts as well as treatises on Architecture—the Silpaśāstra manuals.

The textual matrix of formal architecture in India emanates from the significant Upaveda of Sthāpatya which in its turn through the science of Vāstu shower the scientific techniques of creating the choicest residences for man and abodes for gods as protectors of the land and people. The sources of architectural details of Vāstuśāstra are myriad like the Sūtra literature of the Grhya and the Sulba group, Purāṇas like Matsya, Skanda, Agni and Viṣṇudharmottara (forming an appendix to Viṣṇupurāṇa), etc. Āgamas, which are followed especially in the south of India, deal with vāstu rules to a considerable extent. The Kāmika is largely devoted to Śilpa and Sthāpatya arts. Along with such texts, there are the Tantra literature like the Haṇḍaśīya Pañcarātra, Sāṁhitās.
like the *Bṛhat-samhitā, Pratiṣṭhā* (installation) manuals like the *ĪśanaŚiva-gurudevapaddhati* and regular northern and southern Śilpa texts of mythical Viśvakarman and Maya authorship. Further the *Aparājitaprechā*, the *Rūpamaṇḍana, Samarāṅgana Sūtradhāra* and *Viśvakarmaprakāśa* deal with northern style while the *Mayamata, Kāśyapaśilpa*, the *Mānasāra, the Śilparatna, Tantrasamuccaya*, etc. are typical texts dealing with the southern style. The Śilpa texts have scientific elements of exposition of the physical, geographical, astronomical, philosophical, mathematical and iconographical aspects of temple architecture and divine installations and everything is reduced to formulae in black and white, in a way that should prove easy to the pious entrepreneurs and practitioners. Indeed, the methodology of temple construction, its rites and ceremonies and its sociological and religious rewards, are all so explicitly documented, that a degree of unquestioning submission to the rules set out in the texts became customary. Most of the Agamic texts laid out comprehensive and scientific formulae for the proportionate measurements of the constituent limbs and lineaments of the temple models, and tended to cover all the variants and atypical types.

**Śilpa and Tantric texts in Kerala**

Unlike in many parts of India, Kerala temples preferred the original Vaidika and non-agamic rituals with a stress on sanctity, simplicity, lack of esoteric overtones and a prevailing naturalism. Though the Kerala architects took inspiration and constructional guidance from the common fountain of the Indian Vāstu and Śilpa texts, it is interesting to find that certain manuals have a decidedly local stand and are considered to having been compiled for regional guidance. For example, the *Tantrasamuccaya* which is unanimously accepted to be greater than the earlier *Śilparatna*, is primarily intended for Kerala and spells out the regional architectural aspects in its most outstanding features.
The evolution of Tantra Siddhānta and the Tantrasamuccaya

The Vedas which are the corner stones of Indian Sanātana dharma have two main branches of realization—the Jñānakāṇḍa and the Karmakāṇḍa. The first includes the Upaniṣads and similar philosophical treatises. The Karmakāṇḍa consists of Mīmāṃsā Siddhānta of which a continuation and outgrowth in later times was the Tantric Siddhānta. Perhaps antedating the Vedic practices, the Tantra has had been in vogue in the folk religions in the various regions of the country and developed in the Tantric systems of the Mahāyāna Buddhists and the Śāktas. Traditionally of the five well-known schools of Tantra, which transcended the boundaries of present day India, the Kerala, Kashmiri and Gauda traditions were recognized as distinct.4

During the ages the sacred performers in Kerala developed a vastly complicated technology of worship, marked by continuity and change from the earliest ‘primitive’ forms to sophisticated ‘modern’ variants.5 With the Brahmanical settlements in Kerala, the transformation of the pre-existing local Tantric practices and the traditions of the Buddhists as well as the left-hand practices (Vāmācāra) of the Śāktas were altered to a certain extent to de-emphasize the bloody and orgiastic practices and the Kerala Sampradāya (Kerala model) as more sāttvika (refined) in nature and became a kind of vedic worship in Tantric mode, though the original practices continued in certain cases. Sanskrit works like the Śāradātilaka, the Praṇaṅcasāra tantra, the Prayogamaṇjarī, the Īsānaśivagurudevapaddhati, the Rahasya-gopālatantra, etc. became the standard works and strictly the monopoly of Brahmin practitioners. All these earlier works were incorporated into the famous and authoritative work, viz. the Tantrasamuccaya by Chennas Narayanan Nambudiri-pad around 1427 AD.

The Tantrasamuccaya

The Tantrasamuccaya of Chennas Manakal Narayanan
Namboodiripad is a compendium of the enlightened version of the Tantric system and deals with every detail of temple worship from the planning and architecture of the temple, fixing the location and site, qualifications for an Ācārya who shall conduct the rituals, purification and installation of structures and icons, purification and instilling of 'life' into the idol, modes of meditation, rituals, and practice for the body of the worshipper, the premises and the idol itself, the pūjā rites, including the daily, monthly, annual and festive rituals, and the reinstallation, reconstruction and repairs of existing temples. Two commentaries on this great work carried it forward and linked it with the earlier texts on the subject, the Vimarśini (a critical review) by Chennas Sankaran Namboodiripad and the Vivaraṇa (description) by Krishna Sarma, one of the disciples of Chennas Namboodiripad; Krishna Sarma's another compendium—Śeṣasamuccaya expanded the coverage to include rites related to deities who had not been covered in the Tantrasamuccaya. A Malayalam commentary titled Kuzhiikkattu Paccha composed by one Kuzhikkat Maheswaran Bhattatiri, a commentary known as Tantrasamgraha by Kelallur Chomatiri, Kriyadeepika by Vasudevan Namboodiri, and text called Pudayoor Bhasha, etc. have further popularized the scholarly content in the Tantrasamuccaya. The prescriptions in these works are adopted in most temples, but with significant exception. In the ancient Tiruvalla temple, the Śravaṇa Pūjā, closely following the Vedic formulae is retained. In some Viṣṇu temples of Kerala like Śripadmanābha Swamy temple a Paddhati Sampadāyam, different from the Tantrasamuccaya is known to be followed and the main practitioners of this system of Tantra in temples belong to the Tarananallur Tantris of Irinjalakkuda. The variations are said to be however not fundamental and the Tantrasamuccaya continues to be the undisputed authority on the subject. Though the work was composed in the fifteenth century, its contents are based on very old traditions carried forward orally from generation to generation. It was compiled on the basis of ancient texts
such as the *Mayamata* of Maya and *Kāśyapiya* of Kāśyapa Mahārṣi. A free translation of the *Śilpa* part of the text into Malayalam by Kanipayyur Damodaran Namboodiripad and the interpretation of the *Tantrasamuccaya* typed script of K.Rāmapisharati⁷ are utilised for references in the present paper. Another free translation, *Thatchusastram Bhasha*, and edited by one Cheruvally Narayanan Namboordiri has also been of referential use to corroborate the conclusions of the *Samuccaya*.⁸

The *Tantrasamuccaya* is a comprehensive compendium and is a manual offering constant guide to the practitioners of temple rites, rituals and architectural application. It has three parts and twelve *paṭalas* or sections ranging from *Bhūparigraha* or selection of site for a temple, *Adhiṣṭhānavidhi*, *Ekatalavidhi*, *Dvitaladividhi*, *Bimbalakṣaṇa*, *Dhyānaślokas*, *Dhvajalakṣaṇa*, *Nātyamaṇḍapa*, *Gopuravidhi*, etc. Geometrical and scientific techniques are utilized for finding the directions. By a simple construction of lines the north to south axis is drawn as the *Nādisūtra*. From this, the directions are clearly drawn in quarters. Accurate mathematical calculations are given for measurements for the *Adhiṣṭhāna* (basement), the *Stambha* (pillar), the *Upaṇiṭha*, the *Padma*, measuring methods of the heights of the *Prasāda* or *Kṣetra*, marking of the divisions like *Garbhagṛha*, *Antarāla Madhyanati*, etc., the measurements for the *Garbhagṛha*, the thickness of the walls of the *Garbhagṛha* termed as *Ghanabhitti* the scheme of the outer walls, the main door or *dvāra*, the places of the *Ghanadvāras* (make-belief doors) and *toraṇas* over them, etc. It speaks of the *Vedikā* at the base as ornamented by the *Paṇjaras* and the *makara* balustrade for the approach steps into the main temple. It specifies only such elements like *Oma* (basal block), *Ghaṭa*, *Maṇḍi*, *Virakāṇḍa* and *Potikāś* for the pillar, thus revealing the late date of the text by which time pillar had become stereotyped. It refers to the ornate exterior of the circular sectioned *praṇāla*. In its description of the *Praṇāla*, the *Samuccaya* is even more explicitly suggestive of the developed mediaeval
Kerala situation. The dimensions of the door post, characteristics of the Sopūna, the dimensions of the Śālās, Kūṭas, etc. and the measurements of the Uttira (beam) like Khandottara and the rafters (Kazhukols), all are very precisely enumerated. The process of metal covering for the stūpi and the Śikhara, the ornamentation of the Grīvā and the measurements of the various parts of the prastara—all are scientifically depicted. Precise calculations for the dimensions of the Ekatala, Dvitala, and Tritala Vidhis of the prāsāda are given in measurement techniques using typical Kerala terminology. The construction techniques of square, round apsidal, elliptical, hexagonal and octagonal structures of prāsādas are given and the geometrical and mathematical measurements are very keenly calculated. The location of the Mukhamanḍapa and the classification of the sanctum according to their shape along with details of the Panchaprākāra are depicted.

Paṇcaprākāra
The Paṇcaprākāra scheme of Kerala temples involves the antarmaṇḍala (zhatte balibattan or the sanctum chamber), the antahara (cuttambalam or nalambalam), Madhya hara (vilaku madam or the ambulatory on the edge of the plinth) bōhyahara (Sivelippura) and maryādā (Purāmadil). The avatāra maṇḍala consists of the first Prākāra which would be half way from the sanctum and should have 2/2 square of the Śrīkōvil. The Samuccaya makes it clear how only the first and the last Prākāra will have a facade (Mukhayama). The namaskāramaṇḍapa should come in the middle of the Śrīkōvil and the Agrasabhai. The eight balikals represent the Astadikpālakas who should face the opposite directions. In most of the later temples of Kerala, the mukhamanḍapa, entirely of wood work or simplified patterns, encloses the bālipīṭha while in many of the earlier temples, the bālipīṭha is well outside along the eastern axis and open to the sky. In
the Madhyahara is found the Dīpadhāman (cloister where the lights were lit).

Usually in South Indian temple structures, there would be an outerwall or maryādā with a tiered gateway (gopūra) for each of the prākāra. But in Kerala only in the last outerwall there would be a gopūra and the Kerala gopūra seldom overtop the Vimāna. The tiers in the gateway seldom exceed three. The notable exceptions as at Thiruvananthapuram Padmanabha Swamy temple are obviously copied from the Pāndya style.

The Tantrasamuccaya alone is enough to prove the precise scientific technique and engineering skill followed in Kerala temple architecture. For mathematical calculations the science of Jyotisha (Jyotirgānitya) became a correlative to Vāstuśāstra.9

Site selection and fixing of directions

One of the former sections of the Samuccaya deals with bhūparigraha or the selection of suitable site for the temple based upon specific lakṣaṇas and the taking charge by the Tantri of the spot for further ritual cleansing rites. After that, ingenious methods are used for fixing of the cardinal directions without the use of a compass. The shadow cast by the sun on successive days is measured, after applying corrections according to whether it is in the summer or winter solstice. A cylindrical stake in length a muzhakol (a somewhat locally varied measure of length divided into aṅgula and may vary from 27-30 inches) is used for the measurement. After the identification of the directions, the site is formally handed over to the Tantri for initiating the construction. He, after a number of rituals, starts with a ritual ploughing and sowing of seeds in the site.

The geometry and philosophy of architecture

Central to the philosophy of Indian architecture is the concept of Vāstu puruṣa, an anthropomorphic deified figure.
imagined to be lying within the building space, with his head to the north east and his feet, pressed together, in the opposite direction. The Västupuruṣa’s posture should not be disturbed and the little squares into which the site is split up in the successive quartering, are believed to be home of certain Vedic deities related to the varied aspects of a balanced cosmic energy. Depending on the posture of the site, geometric variations are permissible but care is to be taken that the relative orientation of these auspicious deities is unaltered. The Västupuruṣa’s benevolent existence for the generation of positive cosmic energy is achieved by a balance of construction and open spaces within the site which “functionally promotes adequate ventilation and aesthetic harmony.”

Like all the significant Indian treatises on Architecture, the Tantrasamuccaya also keeps up the scheme of the science of vāstu in laying the geometric and conventional rules of temple architecture. The geometric principles underlying the concept of vāstu have cosmic significance, the east west diagonal representing the ecliptic along which the sun and the moon apparently traverse, it is thus the bhrāmavīthī or the cosmic path. The twelve squares adjacent to it represent the twelve signs of the zodiac each with its presiding deity. The area outside these can be further demarcated into the eight positions of the cosmic quatrains—the aṣṭadikpālakas. Thus the temple site is a microcosm recreating the Universe in the middle of which the icon representing the deity is to be installed and the space is reserved for Brahmat, the creator of the Universe.

Measurements and Scientific precision of structures

In the paṭalas or parts of the Samuccaya dealing with Prākāravidhi, Adhiśṭhānavidhi, Sthambhavidhi, and the Bimbavidhi the scientific construction techniques are discussed and the units of measurements are mostly typical of Kerala. The usual units are kol, angula, yava, paramāṇu,
trasarenu, kışku, daṇḍu, nādikā, yoni, āya, vyāya, gaja, vyāsa, etc. The smallest unit is yava (grain), next comes aṅgula and the greater is the Kol. Usually for temples just like for houses, the kol becomes the basic unit. A corelation units is established as following:

\[
\begin{align*}
1 \text{ kol} &= 24 \text{ aṅgula} \\
1 \text{ aṅgula} &= 8 \text{ yava} \\
24 \text{ aṅgula} &= 1 \text{ kışku} \\
4 \text{ kols} &= 1 \text{ daṇḍu} \\
8 \text{ daṇḍu} &= 1 \text{ ranju} \\
1000 \text{ daṇḍu (2.88 k/metre)} &= 1 \text{ nādikā (nazhika)} \\
24 \text{ minutes} &= 1000 \text{ daṇḍu etc.}
\end{align*}
\]

When it comes to detailing the measurements for the pillar, the Adhiṣṭhāna, the Garbhagṛha, doorway, etc., the height, breadth, and the perimeter are given in units of yoni, aya, vyāya, nakṣatra, daṇḍa etc. The exact scientific and mathematical precision of the temple parts was ensured through these measurements of construction. For instance when the desired perimeter was multiplied by three divided by eight the remainder thereof is yoni, and when divided by fourteen the remainder is vyāya; again when the same is multiplied by eight and divided by twelve, the remainder is āya; when divided by twenty-seven, the remainder is nakṣtra; when divided by seven, the remainder is the day of the week and when divided by thirty the remainder is tithi.

An increase of āya over vyāya must always be secured; otherwise it is inauspicious. The auspiciousness of nakṣtra etc. must be known through the science of astrology.

Parts of Adhiṣṭhāna and their proportion

After telling the methods to calculate the height of the building from the pādukā of the basement to the stūpi, the various parts of the adhiṣṭhāna or basement part of the temple structure and their proportions are given. The
adhisṭhāna mouldings for the Kerala temples usually consist of components like the upāpitha, the padma (padmapādukā), jagati, Kumuda, galam, padi, vedi, etc. The plinth combinations may vary slightly as per the varied temples and various types of measurements are provided in the Samuccaya for the distinct parts of the adhisṭhāna. In all descriptions there is a stipulated mathematical correlation of the dimensions of the structure of the prāsāda and those of the different components like the upāpitha, padma, kumuda, jagati etc.

In part II of the Samuccaya, the Stambhavidhi or the rules for the disposition and construction of the pillars are given. The shape of the pillars, their components, their faces and nature of their ornamentation etc. are specified. Then the location of the door, the height and breadth of the doorway in accordance with the garbhagṛha, the characteristics of the sopāna, description of the ghnaadvāra, the Torana etc. form the rest of the Samuccaya part on Stambhavidhi.

Part III of the Samuccaya contains Bhittividhi or rules regarding the construction of the wall and the description of the vedikā. The height of the vedikā may be equal to that of the prati or one-eighth, one seventh or one-sixth of the height of the pillar. Every prāsāda will have pillars, toranas and four doors. For bigger prāsāda there will have decorations like śālās, kuṭas, nāsikās, jālaka and shining pañjaras. The pañjaras are to be made of the dimensions of two, three or four daṇḍas with nāsikā. Jālakas are to be constructed above the vedi; two, three or four daṇḍas in vistāra. The dimensions of the kuṭas, śālās, description of the kumbhalata, the peculiar ornamentation of alpageha etc. form the rest of the Bhittividhi.

Within part IV of the Samuccaya the characteristics of Ekatalaprāśādavidhi are given. The measurements of the main beams (uttara) used in the building of Ekatalaprāśāda (single storied temple) are mentioned, the khundottara having a thickness and breadth equal to that of the vistāra of the pillar.
The proportions of other beams like Rūpottara, Vajana, mahāvajana are given. Above the beam is to be placed a paṭṭikā (rafter) having a breadth of the depth of the uttara and a thickness of half its breadth. Construction of the ceiling with wood or stones the methods of the use of rafters etc. are specified. Above the uttarapāṭṭikā are to be placed the rafters with their extremity secured in the kūta. The rafters are to be covered up all around with planks of good tree. Above it a stūpi, is to be fixed having half the height of the basement, composed of the full-blown lotus, kumbha etc., with its top of the shape of the fresh lotus bud. The Śikhara of the Vimāna must then be covered up with sheets of metal such as copper.

In the next part (Pt. VI) of the Samuccaya, the Prākāravidhi of Dvitala-prāsāda with its different measurements and construction methods are described. In part VII of Prākāravidhi the rest of the Paṇca-prākāra with the techniques, scientific and philosophical principles behind each construction and the measurements in danda and aṅgula are given. Thus the Mukhamandapa, the dimensions of the Balipīthas, the pūjāmmandapa, the antahara, the padasudra types of sabhā, etc. are delineated.

Śrikoval (Garbhagṛha)

The Śrikoval (Garbhagṛha—the womb house) is the sanctum sanctorum, the epicentre of a temple. So utmost care is taken for its construction “with respect to architecture, beauty, serenity and above all security.” Of the five broad categories of garbhagṛha, square, rectangular and circular types are more common in Kerala. Circular types are peculiar to southern Kerala. Rectangular Śrikovals are mostly those of gods like Śāstā. Apsidal Śrikovals are seen in northern and central Kerala. The Tantrasamuccaya has provided nine measurement techniques for constructing the garbhagṛha with its dimensions in relation to the diameter of the prāsāda as a whole. For example, in one method it is stated that when the breadth of the prāsāda is divided by numbers beginning
with three and ending with fifteen, the *Garbhagṛha* may be
given a breadth which may begin with two parts and end
with eight.\(^{14}\) Each of these types of *Garbhagṛha* can be either
with a solid wall or with two or three annular walls around
the central chamber, i.e. the nirantara and the sāntara
respectively. A variant of the sāntara type is represented by
examples wherein the ambulatory passage is provided
between *garbha* and *ardhamanḍapa*, going all around the
former, as at Tirumittakkode temple. The *Garbhagṛha* of
this famous Kerala temple is also an instance of great scientific
skill being displayed by the Kerala *Śilpin* for instance, on days
when the sun rises over the equinox, its rays entering through
the eastern doorway into the *nalambalam*, falls directly on
the idol in the *garbhagṛha*. The latitudinal degree of the
sun rays, the measurements of the curves of the river infront,
the degrees of the heights and depression of the region—all
these aspects have been kept in mind by the genius of
the architects of the temple *prāśāda* of Tirumittakode to
obtain such a precision.\(^{15}\)

One of the essential parts of the *Garbhagṛha* is the
waterchute and the *gomukha* to carry the used water to be
taken out. The water drain is to be constructed at the end
of the *prati* or *gala* along the *madhyasūtra\(^{16}\)* and must arise
from the open mouth of a *Vyāli* adorned with necklace,
wreaths, creepers etc. while its extremity must resemble the
*Gomukha*. Another segment leading to the *garbhagṛha* is
stated to be the *sopāna*. Beginning with the foot rest of the
door and going down to the level of the land an even
number of steps of *Samani* dimensions of hard stone in one
and a half or two *dandas* in extent, and whose either extremity
is bounded by creeperine structures issuing from out of the
mouth of a *Makara* situated on either side of the front door,
the *sopāna* structure is delienated. The temples are so
designed that beyond the *Valiabalikallu* and the *sopana* one
gets a straight view of the main installed deity. All the
succeeding openings are arranged in order to enable this
and provide an artificial perspective lending a feeling of great depth and distance.

*Idol installation and the Tantric concepts and rites*

Pratisthānavidhi or description of the scientific and mathematical location of the exact point of installation of the idols of the temple forms a significant section of the Samuccaya. After a cosmic and mathematical segmentation of the garbhagṛha into forty-nine divisions, the centralmost area is called the Brahmaṇḍa, surrounded by the Devapāda, Mānuṣapāda and the Piśācapāda. A further subdivision into segments is then done and the pratisthā (installation) will be done from the eighth segment towards the rear. The idol is to be installed with a slight deviation towards the north of the central east-west line with a further deviation towards the north-east corner. The deviations depend upon the deity to be installed and the exact directions and locations within the Brahmaṇḍa, Devapāda and Piśācapāda where the different types of idols are to be installed with all types of Tantravidhis or modes of Tantric rites and rituals as detailed in the Samuccaya.

*Tantric concepts—the Sadādhāra concepts of human body and their application in temple consecration and idol installation*

From a description of the Garbhagṛha (Śrikovil) and the Pañcaprākāravidhi, their dimensions and relative measurements and shapes based on scientific calculations, the Samuccaya through the succeeding Paṭalas (sections) deliberate on the Tantric modes of rites and rituals to recreate and modulate the cosmic energy into the concepts of Īstadevati (select godly form) idol of the specific temple constructed in order to be of positive benediction to the devotees concerned. Upaniṣads like the Taittirīya refers to the pañcakosa (five segments) of the Sūkṣmaśarīra or inner body of man. Human existential body is explained in Indian philosophy of Yoga within the two sections Sthālaśarīra.
(external and visible body) and Śūkṣmaśarīra or inner body). Śūkṣmaśarīra consists of pañcakośas (five segments)—Annamaya, Prāṇamaya, Manomaya, Viṣṇānāmaya, and Anandamaya kośas. Human body is totally referred to as a Ksetra (temple). Just as the pañcakośas exist within human body (Śūkṣmaśarīra) so also the Mūrtiksetra (Devaksetra or temple) is consistent with the pañcaprākāra. Just as human soul, exists within the pañcakośas so the particular deva (godly concept) exists within the pañcaprākāra of the temple. The pañcaprākāras like (1) Antarmanḍapa, (akatebalivattom) (2) Antahara, (nalambalam) (3) Madhyahara (Vilakkumadam and Dīpstmamba) and (4) Bāhyahara (pradikṣaṇāpath and Sevelipura) (5) Maryādāprākāra are equivalent to annamayakośa, prāṇamayakośa manomayakoṣa, etc. As the structural patterns of temples extended the surrounding walls and gopūra came to be constructed for all prākāras.

Similarly as per the Sthūlaśarīra (material or outer body) concept of the individual (puruṣa) the Ksetramandala (temple region) is considered to be the bodily parts of the ksetrapuruṣa. The parts of the temple from Garbhagṛha to the Mukhamandapā (ardhamandapā) along with the entrance wall of the temple with gopūra are conceived to be similar to limbs of human body. So Śrikovil (garbhagṛha) conceived to be the head, antarāla to be the face, nāmaskāramandapā to be the neck, mahāmanḍapā to be the chest and belly, ardhamandapā (mukhamandapā) to be the hands, Valiabalikkal (big bali stone) to be the thighs, and the entrance gopura to be the feet of the deva. As God, was regarded to be the ruler of Universal dharma. He was conceived to be wearing a crown equated to the dome of the temple.

The Tantrasidhānta conceives the Brahmānda (universe) or Samaśtiśarīra to be the macrocosm while the individual human body (Viṣṇīśarīra) is its microcosm. The universal soul (mahācaitanya) which expands through the Samaśtiśarīra referred to as Brahma or Tripurasundari in Tantric concept
and as **Yogapurusa** in Vaishnava concept, exists as the yogic force of **Kundaalinī** in the individual body. The individual body (**Śūkṣmaśarīra**) as per Tantric yoga concept is made up of six energy circles and above all the final energy circle (**Ṣaṭcakras**) of **Sahasrāra cakra**. These are not manifest (**Pratyakṣa**) but exists in the **śūkṣma śarīra** and to be manifested only through Yogic practices of the utmost degree. The microcosmic energy of **Kundaalinī** is conceived to be in a dormant state in the basic **cakra**, the **Mūlādhāra** (pelvic plexus), within the backbone (**meruḍaṇḍa** in Yogic concept), the three basic nerves of—**idā**, **piṅgalā** and **sūsumṇā** are conceived—**idā** in the left, **piṅgalā** in the right and **sūsumṇā** in the middle which is the hollow passage for the upward journey of the **Kundaalinī** force woken by the dumb-found practice of yoga **prāṇāyāma dhyāna**, ** mantra** and utmost concentration under a real **ācārya** (guru). The awakened encircled and coiled force of **Kundaalinī** passes upwards awakening the six energy circles of the **Śūkṣmaśarīra**—(1) **Mūlādhāra**, (2) **Śvādhīṣṭāṇa**, (3) **Maṇipūraka**, (4) **Anāhata**, (5) **Viśuddha**, and (6) **Ājñācakras**.

When the awakened **Kundaalinī** energy reaches the topmost circle or **Sahasrāra cakra** on top of the head, it is said the blending of Śiva-śakti or the basic forces of the universal concept occurs. According to the Tantric concept this blending of extraneous energy fills the yogi with an unexplainable state of salvation and the individual attains eternity (**jīvanmukti**).

As temple is considered to be the **Samayti** form of **Devaśarīra** (body of Deva) so before the construction and consecration of the temple, at the bottom of the selected spot for idol installation the symbols of **Ṣaḍādhāra** (six circles) are installed in stone or metal one after another. Then the **Ācārya** or main **tантři** transforms his Yogic energy into the symbols and above it the idol is installed with necessary **pujās**, mantras and rites to awaken the existent energy within the idol. As symbolic of the **mūlādhāra cakra** a square rock is
placed deep under the exact point of the idol installation. Above the basement rock there would be made crescent shaped pit and filled with corns symbolizing the svādhiṣṭhāna cakra and known as Dhyānapītha. Upon it is placed a jar full of gold coins and precious stones, etc. symbolizing Manipūraka cakra. Above it an eight petalled lotus made of gold, silver and copper is placed and symbolizes the Yoga cakra in place of the heart or Anāhata cakra in supplication of God. Upon the lotus there is installed a tortoise (Kūrma) made of gold, silver, copper, etc., symbolizing pañcaprāṇa concept indicating the suppression of the five senses and concentration for Yogic uplift. The Kūrma, faces the facade of the garbhagrha. The representation of the yogapath of the neck region (yoga nāla) in the form of a cylinder from the Kūrma to the surface of the earth. Upon it is placed a genderless stone—napunsakasīlā as symbolic of the formless, genderless ‘sat’ or Parabrahman. It is placed after pūjā with innumerable chanting of necessary mantras. Upon it is placed a pītha or low dias which would be made of male stone if the idol is a female deity or a female stone if the deity would be a male one. It symbolizes the Śiva-Śakti symbiosis which is conceived according to Tantric śāstra to take place in the Sahasrāracakra. Indeed the Sadādhāra installation is the identification of the Śādāhaka’s (devotee’s) Sūkṣmaśarīra to be in unison with the Devaśarīra. It is hoped that just as the nectar of Yogic energy disseminates from a Yogi who has attained the culmination of kundalini samyoga at Sahasrāra, so, Godly energy will spread over the devotees who adore the deva with a pure heart, a pure body and Yogic devotion.18

Rituals related to idol installation

Before the final adoration and pūjā can take place, a series of rites and rituals are to be performed as prescribed in the Tantrasamuccaya where the tantra plays a prime role. For example the Vāstuṭal where in the Vāstuṭarūtri is invoked (tāvāhāna) and offerings are made once again. Before the
actual installation is done, there takes place the ritual processes of *bimba parigraha*, *bimba śodhana*, *netronmilana*, *kautuka bandhana*, *maṇḍapa samskaraṇa*, *agnijanaṇa*, *prānapratiṣṭhā*, *aṣṭabandha preparation*, *godohana*, *vaiśya homa*, *Prāsāda-pratiṣṭhā*, *kalasa-homa*, *parāvahana*, *avasthāvahana*, *tattvahoma* and *kalasas*, the *pratiṣṭhā*, *Natakhal pūjā*, Śrī Bhūtabali, etc. in order to propitiate the chief deity as well as his or her supportive and sub deities.  

**Conclusion**

Thus a study of the significant Śilpa text of the *Tantrasamuccaya* reveals not only the scientific and Tantric aspects of temple construction but also the fundamental ideas which underlie the structure and symbolism of temple architecture and idol installation especially in relation to Kerala. It is a profound theme and further study of individual instances, techniques and variations of Kerala temples and idols, is needed for a deeper understanding of the scientific and tantric technologies underlying the sacred traditions and rhythms of life of the native people. The positive energy emanating from the different types of idols like the *pañcalohavigraha*, the *navabhāsanavigrahas*, the *dhvaja-stambhas*, etc. offer further scope for study in this direction.

**References**


3. Ibid., p. 6.

12. Ibid.
16. Cheruvally Naravan Namboodiri, *Thatchastraṃ Bhasha* (Mal.) for details of the *Samuccayavidhi* for the divisions of the *garbhagṛha* and the specific parts for different deities. The original text published in the series Malayalam Granthāvali, no. 146, 1982/1157 – Based upon that Cheruvally Naravan Namboodiri has brought out a freelance translation of *Thatchastraṃ Bhasha (Devalayavidhi)*, Devi Book stall, Kodungallur, 2005.
17. Ibid.
18. See for details *Kṣetraṇīyānakosam*, op.cit.
19. For details see *Tantrasamuccaya*, as well as Jayasankara, op.cit. Copies of the original palm leaf manuscript of the text are kept in Oriental Research Institute and Manuscripts Library, University of Kerala.
India is considered to be the mother of āstū as the ancient saints have formulated various principles of it. These were formulated thousands of years ago where the sages kept in their minds the result of sunlight and energy and stabilizing nature’s five elements in such a way as to get the maximum advantage out of it.

Vāstu Śāstra, the refined combination of ancient Hindu traditions developed as an art, analyzed as a science and interpreted astrologically can lead the way in to healthy living. Basically Vāstu Śāstra deals with the exercise of architecture and building science and in fact it gives a fair touch in every aspects of life on the earth as well as the universe.

The art of arranging rooms and appliances in a house or building by following the divine laws of Vāstu is known as Vāstuvidyā. It will help to achieve success in various facets of life including family, professional, spiritual, financial, health and relationship. It also helps to bring peace and prosperity to home and its inmates.

Building a house as per the Vāstu norms is very much essential because it brings atmospheric natural energies. So constructing a house with the Vāstu principles will greatly bring peace, success and opulence to the dwellers residing
in the house.

The architecture of Kerala has been influenced by Dravidian and Indian Vedic architectural science since over two millennia. The characteristic regional expression of Kerala’s architecture results from the geographical, climatic and historic factors.

The Tantrasamuccaya, Taucṣāstra, Viśvakarmiya, Mayamata, Manusyaḻayacandrikā, Mānavavastulakṣaṇa, Devālayacandrikā, Bhāskariyamatavyākhyā, Manusyaḻayalaksana, Vāstuvidyā, and Vāstulakṣaṇa are the important architectural works which have a strong impact on Kerala’s architectural style. The Manusyaḻayacandrikā a work devoted to domestic architecture is one such work which has its strong roots in Kerala.

The location feature of Kerala has influenced the social development and indirectly the style of construction. The evolution of domestic architecture of Kerala followed closely the trend of development in temple architecture. The primitive models were huts made of bamboo frame thatched with leaves in circular, square or rectangular plain shapes. The rectangular shape with a hipped roof appears to have been finally evolved from functional consideration. The closed form of Kerala houses were thus gradually evolved from technical considerations.

**Types of Houses**

A house in Kerala is generally called Veedu. The veedu gives shelter to joint-family of tharavad. The joint family system (tharavad-kinship system) consequently promotes the tradition of living in a huge shelter or mansion (veedu-object of house). The term is Dravidian and is used in some parts of Tamil Nadu and north Sri Lanka for all types of residential architecture, but generally the people of Kerala will refer to their veedu as tharavad. However, domestic architecture in Kerala is diverse. Particularly, tribal people have more ways of referring to house or huts according to locality, social status and structural types. Observations on the proper
traditional house generated five types of spatial house structures.

There are five types of traditional domestic architecture or *Veedu* in Kerala, namely: 1. The humble house, unknown by any building treatise of Kerala, belongs to ordinary folk and tribal people (*cheri, chala, kudi, variyam or pisharam*); 2. The *Ekaśālā*, an I-shaped single rectangular hall house, belongs to farmers or middle-class non-farmers; 3. the *Nalukettu*, a courtyard house, belongs to landlords; 4. The great mansion *Ettuketu* and *Patinarukettu* (double ettukettu) or much bigger structure, belongs to very rich landlords; 5. Commoner houses are simple ordinary houses scattered abundantly in the cities and villages. They still show applications of traditional construction and vocabulary in an eclectic popular and free manner.

Basically the domestic architecture of Kerala follows the style of detached building; row houses seen in other parts of India are not mentioned in Kerala except in settlements occupied by Tamil or Konkani Brahmins. In its most developed form the typical Kerala house is a courtyard type—*Nalukettu*. The central courtyard is an outdoor living space which may house some object of cult worship such as a raised bed for *Tulasithara* or *Mullathara*. The four halls enclosing the courtyard, identical to the *nalambalam* of the temple may be divided into several rooms for different activities such as cooking, dining, sleeping, studying, storage of grains, etc. Depending on the size and importance of the household the building may have one or two upper stories or further enclosed courtyard by repetition of the *Nalukettu* to form *Ettuketu* (eight halled building) or a cluster of such courtyards. Padippura, Poomugham, Chuttuverandah, Charupady, Ambalkulam, Nadumuttom, *Pūjā* room are the main elements of *Nalukettu*.

*Nalukettu*

*Nalukettu* is the traditional home of Tharavadu where many
generations of a matrilineal family lived. These types of buildings are typically found in the Indian state of Kerala. The traditional architecture is typically a rectangular structure where four blocks are joined together with a central courtyard open to the sky. The four halls on the sides are named Vadakkini (northern block), Padinjattini (western block), Kizhakkini (eastern block) and Thekkini (southern block). The architecture was especially catered to large families of the traditional tharavad, to live under one roof and enjoy the commonly owned facilities of the marumakkathayam homestead.

ELEMENTS OF NALUKETTU

1. Padippura
   It is a structure containing a door forming part of the compound wall for the house with a tiled roof on top. It is the formal entry to the compound with the house. At present the door is not there as car will have to enter the house through the entry. Still tiled roof is provided preferably with a traditional type lamp below the roof. Instead of door for entry, we now have the gate.

2. Poomukham
   It is the prime portico soon after steps to the house. Traditionally it has a slope tiled roof with pillars supporting roof, sides are open. In the earlier days, the head of the family called Karanavar used to sit here in a reclining chair with thuppal kolambi (Spittoon) by the side of chair. This chair will have long rails on either side where the Karanavar will keep his legs raised for comfortable rest.

3. Chuttu Verandah
   From the Poomukham, a verandah to either side in front of the house through open passage called Chuttu Verandah. Chuttu Verandah will have hanging lights in equal distance
hanging from its slope roof.

4. Charupady

By the side of Chuttu verandah and poomukham, wooden benches with carved decorative resting wooden pieces for resting the back are provided. This is called Charupady. Traditionally the family members or visitors used to sit in these Charupady to talk.

5. Ambal Kulam (pond)

At the end of Chuttu Verandah there used to be a small pond with rubble on sides where lotus or Ambal used to be planted. The water bodies are maintained to synthesize energy flow inside.

6. Nadumuttom

Traditionally Nadumuttom or central open courtyard is the prime centre of the Nalukettu. There is an open area usually square in the exact middle of the house dividing the house on its four sides. Due to this four side division of the house, the house has a Nadumuttaom. Similarly there was Ettukettu and Pathinarukettu which are quite rare with two and four Nadumuttom respectively. Nadumuttom will be normally open to sky allowing sunshine and rain to pour in. This is to allow natural energies to circulate within the house and allow positive vibrance within. A tulasī will be normally planted in the centre of Nadumuttom, which is used for worship. Architecturally the logic is to allow the tree to act as a natural air purifier.

7. Pūjā Room

Pūjā room should preferably be in the north-east corner of the house. Idols can be placed facing east or west and the person praying can face west or east respectively. At present, wooden paneling is done on pūjā room walls and there is a standard design for pūjā room which can be given to clients
interested in having traditional pūjā room.

**Key Features**

The whole house is protected with a compound wall or fence. An entrance structure (padippura) may also be constructed like the gopuram of a temple. This may contain one or two rooms for guests or occasional visitors who are not entertained in the main house. The position and sizes of various buildings, including the location of trees and paths within the compound wall were to be decided from the analysis of the site according to the prescriptions in the classic texts. This analysis involved the concept of vāstu-puruṣa maṇḍala wherein the site (vāstu) was divided into a number of grids (padam) occupied by different deities (devatā) and appropriate grids were chosen to house the suspicious structures. The site planning and building design were done by learned Viṣvakarmā sthapatis (master builders) who synthesized the technical matters with astrological and mystical sciences. There are numerous buildings of the Nalukettu type in different parts of Kerala, though many of them are in a poor state of maintenance. Changing socio-economic conditions have split up the joint-family system centered around the large Nalukettu. The Kailasa mandiram at Kottakkal belonging to the Arya Vaidyasala is a standing example of a three storeyed Nalukettu complex. Of the best preserved examples of this type are Mattancherry Palace at Kochi and the Taikottaram of the Padmanabhapuram palace near Kanyakumari.

*Nalukettu* type buildings are also seen in many villages and towns, occupied by prominent people. The humbler building of the population are however smaller and simpler in form but basically derived from the Nalukettu. *Nalukettu* is a combination of four halls along four cardinal directions, centered around the courtyard or anāgana one may build any one of the four halls (ekāśālā), a combination of two (dviśālā) or a complex of three (triśālā) depending on the
needs. The most commonly found type in Kerala is the ekaśālā facing east or north. Being located on the western and southern sides of the aṅgana they are referred to as western hall (padinjattini) and southern hall (thekkini) respectively.

*Nalukettu* can be differentiated based on structure occupants and by the number of floors. Traditionally *Nalukettu* has one courtyard; however some *Nalukettus* have two courtyards, which are known as *Ettukettu*. While *Nalukettu* and *Ettukettu* are more common, *Pathinarukettu* are extremely rare, due to its enormous size.

Ancient architecture of Kerala has a very distinctive style. It is an ensemble of simplicity and elegance, simple and all embracing; it is tailored to suite Kerala’s climate and culture. Though much of its secrets have passed into history, the buildings still stand as testaments to the skill of the ancient builders.
THE SOCIAL CO-TEXT AND CONTEXT OF THE TRADITIONAL KERALA ARCHITECTURE

V. RAJEEV

Kerala shelters a unique system of architecture, embedded in the beliefs, legends and rituals of the society from time immemorial. The traditional architecture of Kerala had a grand and scientific history of its own. The architecture of Kerala had its origins in temple architecture and traditional house modelling. Our Vāstu system was substantially influenced by a host of social and environmental factors such as geographical conditions, climatic peculiarities, availability of raw materials and social system. Among the social indicators, the prominent place goes to caste system, feudalism, practice of untouchability, rites and rituals, gender discriminations and agrarian mode of production. Among these prominent place should be given to caste system and gender inequality. The system of caste discrimination occupied a prominent place not only in the modelling of houses, but also in the process of naming it.

The economic relations prevalent in society always had a significant say in the manner and method of house construction. The elite/upper castes in the society built their homes under the nomenclatures like Nalukettu, Ettukettu, and Pathinalukettu, etc. Caste-based segregations commence from the very moment a piece of land is chosen for construction.
According to the position of landscape, it is divided into Govithi, Gajavithi, Nāgavithi and Dhānyavithi, etc. Only on the basis of caste hierarchy, people are permitted to select the land classified above. For example, land with slope in north direction is appropriate to the Brahmins, while as land slopping to southern direction is congenial to the Kshatriyas. (Nampoothiri Chennnas, 2010, pp. 11-13). But the principles of vāstu were not followed precisely in the construction of houses belonging to the lower class. Even in the selection of proper location for houses and measurements, the influence of caste is visible.

Kerala is supposed to be the land of Parasūrāma. So it is obligatory for the Brahmins to have kitchen in the northeast direction of the house. Kitchen, the most prominent part of a home, belongs to the category of sub-house (U’pagṛha) and it is separated from the main structure of the house. The gender discrimination and the marginalization of women in Kerala society accounts for this phenomenon. The taboo put on being seen by men not belonging to the family and the marginalised condition of women influenced the positioning of the kitchen.

The well was near the kitchen or even inside the kitchen to prevent it from being contaminated by the touch of the lower caste. The front portico (Poomukham) is assigned to the patriarch of the house and the back portion called kitchen is usually given to women. It was the rule of the day. Even meals were taken in separated areas designated for men and for women. The position of the door and the bedroom also differed according to Varna (Narayanan Nampoothiri Cheruvally, Trans, pp. 42-43). It is noted that the measurement scales used for each caste were different according to our traditional Vāstu. Accordingly the scales which were used for upper castes were not permitted to the lower castes. But the interesting fact is that the scales used for lower castes were permitted to upper castes with out any restrictions (Narayanan Nambuthiri, 2011, p.100).
Even in the carving of idols in temples, this practice of gender inequality prevails. The construction of a temple is strictly based on the concept of male (Puruśa Saṅkalpaṃ). According to Puruśa Saṅkalpaṃ the Śrīkovil is the head, Antarāla the face, Ardhamāṇḍapa the chest, Dhvajastambha the pennies and Balikiptha the anus. The wood and stone meant for temple work is strictly restricted to male specimens alone. Vāstu texts elaborate the appropriate attributes of such wood and stone chosen. It can be seen that even in the selection of inanimate objects like stone and wood, gender discrimination was followed. The shape of Śivalinga, the idol of Lord Śiva was different for different varṇas. Tantrasamuccaya, the authoritative text on Vāstu, confirms all the facts mentioned above.

The agrarian system of Kerala too had influenced the structure of houses built. In the same way, the joint family system, man-woman relationship, concept of individual liberty, etc. determined considerably the structure of the house. Moreover, the practice of untouchability also had a crucial role. William Logan has noted that even in the names of habitats the influence of caste and gender is observed. Based on varṇa, houses were designated as Mana, Illoṁ, Bhavanam, Pura, Veedu, Kudi, Chala, Cheri, etc. Houses could be given only male names like Moolakkaran Veedu, Thalikkaran Veedu, Kollan Parambil, Vaanian Veettil, etc. Houses were designed by Brahmins. The actual craftsmen were mere underlings who followed their instructions. Moreover the Tantrasamuccaya directs that the master or Ācārya of vāstu should belong to the Brahmin community only (Guru vipra ashem) (Chennas Nampoothiri, 2010, p. 4)

Metaphysical beliefs also played an important role in this. This includes the concepts of Vāstupuruṣa, the area of the house, the sacred paths (vithis), Brahmaśūtra and Karnasūtra. In every household, certain sacred spaces are restricted to certain members on certain occasions. The central concept of Vāstuvidiya in the moulding of temples and houses is
particularly based on the social structures of society. Equal importance were given to social realities like caste system, gender inequalities, etc. along with vāstu principles in the designing and building of houses and temples.

In this way this paper explores meticulously how the feudal mode of social relations had impact on the indigenous tradition of architecture in Kerala. Hence we can conclude that, like all other branches of informative literature the Vāstu tradition also was dedicated to the upper caste.

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APPLICATION OF VĀSTUŚĀSTRA IN THE
CONSTRUCTION OF TEMPLES AND HUMAN ABODES

PHILIP JOHN

The Science of Vāstu can broadly be identified as the Science of Architecture. The Science of Vāstu is as old as Vedic literature in India. ‘Sthapatya Veda’, an ‘Upaveda’ of Atharva Veda, is the very source of the Science of Vāstu (or Vāstusāstra). Vāstu was one of the thirty-two sciences prevalent during the Vedic Period. Vāstu combines in it various streams of knowledge such as Mathematics, Astrology, Geology, etc.

The architecture evolved at a particular place is intimately connected with the history and culture of that locality. Thus different phases are identified in Indian Architecture, and these, in turn, correspond to the different administrative or cultural eras such as the Era of Indus Valley Civilization, the era of Aryan domination in South India, Mahajanapada period, the era of Magadha empire, the era of Maurya Empire, Śuṅga period, Śatavāhana Period, Kuśāna period, Gupta Period, South Indian Royal period, Pāla-Sena Royal Period, Deccan Period etc. Together with these India has also Dravidic, Muslim, Western and Modern architectural traditions. Each of these has its own peculiar features. These architectural traditions have also been influenced greatly by the religious, cultural, economic and geographical
compulsions of the respective period.

Archaeologists have unearthed from the sites of the Indus Valley civilization remnants of living abodes and allied constructions, religious edifices, other buildings, stone statues, etc. These bear ample witness to the architectural designs of the Indus Valley phase of our nation’s cultural history.

The Buddha vihāras attest to the characteristic features of the architecture of the age of the Buddha. They testify to the systematically codified architectural patterns of the Buddha period. There are clear stipulations for the construction of pillars and columns. Palaces and sculptures are the major constructions and art of the Mauryan period. They also have pillars to their credit. The Śunga period and the Śātavāhana era also have pillars of sorts.

The Kuśāṇa era is noted for its mingling of religion and beauty in architecture. Even though foreign influence is discernible the Kuśāṇa architecture is predominantly Indian in design and execution. We have so many statues of gods and goddesses, and of human beings belonging to this period. Gāndhāra architecture also gives much importance to the making of statues.

Gupta era concentrates on the construction of temples. Statues brimming with divine consciousness are peculiar to this age. The age of the Pāla Sena Kings also is noted for the construction of temples, especially chariot like - temples. The Deccan era has so many famous cave-temples to its credit. The Cālukya kings are known for their patronage of cave-temple architecture.

The Drāvida architecture has been developed under the patronage of the Pallava, Chera, Chola, Pandya, Vijayanagara and Madura monarchs. There are so many temples, maṇḍapas and different types of buildings belonging to this age. Each era concentrates on the different aspects of the external elegance and internal beauty of the temples and other buildings. This period is also known for its variety in
the field of construction.

Muslim architecture concentrates on the construction of beautiful edifices. Monuments are given precedence over temples during this period. But the western style that has followed the Muslim period gives importance to temples, palaces, human abodes and other buildings. Our Modern Architecture is a continuation of Western tradition.

Thus Indian architecture which has passed through different phases has not abandoned its ancient traditions. Moreover, Modern Indian Architecture makes deliberate attempts to return to the golden traditions of our glorious past.

Vāstu Architecture is today known as the art of ‘house building’. For in the construction field, human abodes take precedence over temples and other buildings. Hence the Vāstu architecture is identified as the art of human abode construction. Specific and clear instructions have been given by each age regarding the construction of human abodes.

The project of house building is described in detail in the Vāstuśāstra: it begins with ācārya-varaṇa and proceeds to elaborate the roles and responsibilities of ‘Sthapati’, ‘Sūtra-grāhi’, ‘Takṣaka’ and ‘Vardhaṇki’. The selection of proper land and location is the next step. Tips are provided to ascertain the proper land where Śaṅku Śthāpana (marking) is to be made. Instructions are also given to identify the directions (east, west, south, north) of the land, and where the abode is to be constructed. Means are also suggested to rectify the grha doṣas if any.

Vāstu also provides tips for identifying the characteristic features and various forms of human abodes. The forms of houses range from ‘ekāśāla’ to ‘catuhśāla’ and their related wings. There are stipulations regarding the measurements of all sorts of houses, and their constituent parts like the floor, walls, etc. There are also stipulations regarding adjacent buildings (cattle shed, out house, ‘padippura’, store, dining house, etc.), their measurements, location, etc. Vāstu also
speaks about those trees to be planted near the abode and those to be avoided. It also speaks about the advantages of following their stipulations and the evil consequences if they are ignored.

Temple construction also follows the very same rules of abode construction. It also begins with ‘ācārya-varaṇa’. The ācārya then does ‘Bhūparigraha’ with the help of his co-celebrants. Following the rules of the Vāstuśāstra they identify the proper place, and begin the construction of the temple. The ‘guṇas’ of the land selected for the construction of the temple are the same as those of the abode. The positive effects of the ‘pratiṣṭhā’ depend upon the ‘guṇas’ of the land chosen for the construction of the temple. Once the location is marked and ‘bhūparigraha’ performed the basic stone can be laid. Out of ‘yoni’, ‘āyam’, ‘vyavam’, ‘nakṣatra’, ‘tīthi’, ‘vaya’ and ‘āzhcha’ only the sublime can be selected. Construction of the floor and, if necessary, the errection of the ‘upa-pīṭha’ are the next step. There are different forms and stipulations for the same. The construction of the ‘garbhagṛha’ is very important. The ‘pratiṣṭhā’ is to be performed for each deity at the proper place following the relevant stipulations.

There are specific prescriptions for the construction of outlets from the sanctum sanctorum. Their specific parts and their measurements are contemplated in the Vāstuśāstra. The construction of the pillars is also important. The different forms of the pillars, their different parts, and their measurements are stipulated in the Śāstra. There are specifications for the doors, walls, roof, dome, etc. The number of the storeys of the ‘prāśādas’ and their measurements are also discussed in the Vāstuśāstra. The ‘prāśādas’ are classified on the basis of the number of storeys and their measurements. They are also classified according to their shapes. Thus we can accept shapes like the circular, rectangular, ‘gajaprāśha’ ‘dirghavṛttā’ ‘sadasra’ ‘astāsra’, etc. for the temples. The temples are named according to their shapes. The different parts of the ‘prāśādas’ and their allied
structures are to be constructed according to the stipulations of the Vāstuśāstra. The different forms and shapes, location and decoration of the allied structures from the light house to the ‘dhvaja’ are also prescribed in the Vāstuśāstra.

We have already noted that the Science of Vāstu has described in detail the rules regarding the construction of human abodes and temples. If we compare the stipulations pertaining to the two types of constructions we can see that there are both similarities and differences.

In the construction of the temple the ‘ācārya varana’ is to be performed by the ‘yajamāna’ while the head of the family does it in the case of the abode buildings.

In the case of the temple, the ‘parikarmikas’ also must be present with the ‘yajamāna’ while ‘ācārya varana’ is performed, whereas the ācārya selects the architects for the construction of human abodes. The same gunas of land are acceptable to both the temples and the human abodes. But there is a difference regarding the place selected for the construction of the temple and that of the human abode. It is necessary to identify the directions for the construction of both temples and abodes. Wrong direction is not suitable for either. The procedure to determine the direction is the same in both cases.

Śaṅkusthāpana is one of the initial ceremonies of both abode and temple construction. Usually only one Śaṅku is erected for the construction of an abode. It is erected at the south-west corner. The Śaṅkus must be collected from the sap trees. In Kerala they are gathered from jack trees. For the construction of the temple nine Śaṅkus are to be erected. And they must be collected from ‘punnā’ tree.

Even though the floors usually contain different parts, it is not quite necessary in the case of human abodes. But it is absolutely necessary for the temples.

Circumferences (bālya, kaumāra, yauvana, vārdhakya and marana) are very important in the construction of abodes and temples. External circumferences, internal
circumferences and the circumference of ‘upagrhas’ are especially considered in the Vāstuśāstra. Even though all the circumferences except ‘maraṇa’ are acceptable, the measurements of the sublime circumferences alone are to be preferred.

Compared to the walls of human abodes, the walls of the temples are beautifully decorated. Usually the walls of the temple are not colourfully painted, but only whitewashed. If there are portraits they will be coloured.

As far as the doors of human abodes are concerned, strength is preferred to beauty. But it is inevitable to beautify the walls of the temple. Often metallic designs are inlaid on such doors. On the other hand, windows are given special attention as far as human abodes are concerned.

The roofs of both human abodes and temples have sufficient slope for the rain water to drain off easily and speedily. The roofs of human abodes are simple on the whole, but those of the temples are usually very complex.

The human abodes are constructed with one or more wings. With regard to the number of storeys both abodes and temples are alike. Multi-storeyed constructions are there in both cases.

Allied wings (‘upagrhas’) are part of both human abodes and temples. Wells, ponds, trees, etc. are also attached to both.

In the temples together with the chief ‘pratiṣṭhā’ there are sub ‘pratiṣṭhās’ as well. In human abodes there are both ‘paradevata pratiṣṭhā’ and statues for daily pūjās. It is necessary that both of these should be imbued with divine consciousness.

Local peculiarities and differences are characteristic of human abodes. But they are not seen in the case of temples. The differences of caste and religion also affect the architectural style of human abodes. So also, depending on the installation of different idols of deities, the temples also admit different architectural designs.
VĀSTUŚĀSTRA FOR SUCCESS IN LIFE

Desikom Reghunadhan

Almost all people desire happiness and social upward mobility in life. The home you inhabit is as important as education, wealth and profession, especially in terms of life security. One’s identity and status are directly linked with his home address. The space you live in may have different names like grham, bhavanam, veedu, illam, matdam and so on like home, house, villa, bungalow, mansion, palace, etc. And here comes the relevance of Vāstuśāstra, the traditional architectural science of India. You can make your home a tremendous source of energy both to the dwellers and the visitors, if you integrate the principles of Vāstu while making the building.

Homes can be built after assessing the positive and negative properties and energy levels of the place, and then reducing the negative forces and making use of the positive elements to its maximum extent, with the help of the Vāstuśāstra.

The proverb ‘woman for wedding and land for building’ indicates the significance of the terrain you intend to build your home. A baby is conceived in the minds of the parents before it takes physical form. Similarly, a lot of dreams, imagination and calculation must have been done before a plan is made and a home materialized. But everyone who
makes houses may not have a clear idea of the Vāstuśāstra. A few have some idea about Vāstu. It is advisable that they consult with the experts in the field before they venture to build their homes. There is no doubt that they will only benefit from this.

The principles of Vāstu are based on paścabhūtas (the five basic elements the cosmos is made up of—water, air, fire, sky and earth), weight and measurement. The ideal combination of paścabhūtas brings in a magical harmony like the one we experience in paścavādyā where all the five musical instruments play together complementing each other. This helps to intensify the positive energy level at home. Weight too has an important role to play. The distribution of weight is a matter of serious consideration. If the weight exceeds at undesirable points in the house, its inmates’ efforts to forge in life are bound to meet with failure like the kicking by a man with elephantiasis. Measurements also have to be well balanced and properly ordered. Space has to be used in correlation with its use. Too much space or too less space would not serve the purpose.

Home is like a human body. The body of nature, human being and other living things is the design of an unknown and supreme architect. What would have happened had our limbs been positioned differently? Not only that they would fail to perform their duties but that would create various inconveniences as well. Imagine that our eyes were placed at some other place in the body! Similarly, each part of the house is like a limb in our body. If a part is not in its proper position it would create total chaos. A home has both an external body and an internal ambience.

Weight also has similar impacts. A man may be able to carry 100 kilograms of weight on his head. But he won’t be able to walk much farther if he carries it on some other part of his body. If you pay special attention to weight distribution while building the house, it will definitely bring good results. Directions like east, west, north, south too have great
significance in the construction of a house. The house should be designed in such a way that directions having positive energy is maximized and the ones with negative energy minimized. The parts of the house in relation to their purposes must be situated in accordance with properties of the directions. When part of a house facing a certain direction is considered to be suitable for disposing of refuse including faeces, another direction is considered to be safe for the use of fire, water etc. A room built facing the wrong direction can cause trouble.

The smooth entrance and exit of energy through the house is a matter of vital importance. Sufficient light, water, air and the serenity of the terrain are also essential factors. Directions are related to life styles. At which direction the head has to be placed while lying down, from which direction the fire is to be lighted, the direction to which the toilet be placed—all such minute details must be taken care of.

If the bedroom, study, prayer room, kitchen, toilet, well, septic tank and every other part of the house are built in conformity with Vāstu rules regarding directions, it would be much healthier for the people who live in it. Main doors, side doors, windows, beams and pillars should also follow the same rules.

The lien of the land, its background, measurement, shape, environment and its liveliness are all key factors to be examined before starting the construction of the house. Even such minute details regarding the position of doorsteps and staircase to the placement of computers, washing machine and iron are clearly stated in the architectural science called Vāstu.

Plants, creepers and trees that can be grown around the house have also to be carefully chosen and planted following the rules regarding direction. Also there are clear instructions about where domestic birds and animals can be kept and where the parking space and doorsteps are to be located. Things that can be kept within the house, outside
the house, the position of drainage, electric line, pipe line—
Vāstu gives each and every detail about the construction of
a house.

Houses too have certain marmas (highly sensitive and vital
points in the body) as we have in our human body. They too
have to be taken into consideration while building a house.
They even include compound wall, gate and the surface of
the land. The house should be in concordance with the
configuration of Vāstu, prathama (primary), dvitiya
(secondary) and bāhya (external) Vāstu.

Conclusion

Generally it is a natural instinct of living things to take
refuge in some shelter at sunset after engaging in various
activities during the day. What they seek is security and
peace. When we look at the nests of various birds we come
to realize that it is not only humans but all living beings wish
to have a secure habitation. It is to this space they come
back after finding food, take rest, share their happiness and
sorrows, and mate for the survival of their species.

But for humans, apart from security and peace, house
symbolizes the key to prosperity. Other living beings can
only adapt to their environment. They still do not have the
ability to change their surroundings.

Humans are endowed with superior intelligence and
wisdom. With this faculty, man has always tried to shape
nature to ensure his security. Man who used to find shelter
on and under the trees, over the rocks, on plain ground, in
caves and on meadows later began to make huts, cottages
and mud houses using rocks, stones, sticks, mud and water.
Now he constructs huge multi-storied buildings and is even
planning to erect buildings in other planets.

The present Vāstusāstra is the result of a close analysis of
the history of habitation and its developments. Every culture
in the world had its own way of determining the exact spot
where the house is to be built and its construction methods.
In India, beginning from Varāhamihira, numerous sages have contributed to Vāstuśāstra. Vāstu is like different streams joining together to form a great river and there have always been experts in this field. Different schools of Vāstu were developed in India. But all of them had a single objective: to make a habitation from which man would benefit from nature and nature would benefit from man. In other words, neither should harm one another.

A home is also a place where procreation is done. So it is imperative that the house should in no way make any negative impact on the environment. The principle behind this is that those who build the house or their posterity should never suffer from the negative energy permeated from the environment. The chief intention is that generations after generation should be able to lead a healthy and prosperous life in that home.

Vāstu had been put to use in building palaces, temples, walls, forts, ponds, roads, villages and cities. This testifies that a house built according to the rules of Vāstu would empower its inhabitants. The approach of Indian Vāstuśāstra emphasizes that man and nature should maintain a complementary relationship, like mother and child. Man should fashion his habitation without disturbing nature.

As Kanva describes the love Śakuntalā cherishes for nature in the line “She never drinks water before watering you.” Vāstuśāstra put forward an architectural science which teaches you to live in harmony with nature.

“Living in a good home is
Better than being in heaven
Living in a bad house is
Like being in a whirlpool.”
The concept of Vāstumāndala and Vāstupuruṣa is one of the basic theory on which the Vāstuśāstra is formulated on to its present form. Today many of those who practices Vāstu are totally ignorant about this basic concept and accept it as a decree from god without thinking of its true meaning. There is no doubt that all of our śāstras are derived out from thousands of years of Indian cultural and spiritual experience and from the higher state of minds of great saints. But even then all of these are built up on a strong background of philosophy. Each of the concepts or beliefs in the Vāstuśāstra stood on strong base of philosophy. Without understanding the philosophy one will never be able to use Vāstu principles in true form in its application level. Here in this paper I am trying to put forward a new finding for the basic concept of Vāstupuruṣa and Vāstumāndala on the basis of the Tantraśāstra.

One may wonder how “Tantra and Vāstu goes along?” but truly speaking many of the concepts in Vāstuvidyā are based on Tantra philosophy only. One can find the roots of both of these in Atharvaveda. Many of the ancient books on the Vāstuśāstra like the Mayamata etc. categorically put forward pramāṇas as as said by the tantrikas. In fact Tantra is another
philosophy working on a higher state of mind which established the whole universe in a different pattern culminating in Parā Śakti. It is a philosophy which envisages doing some particular practices to attain self realization or “moksha” after fulfilling the desires in a dharmic way. It never denies worldly life. The Vāstuśāstra too provides a kind of surroundings for the inmates for slowly attaining self realization by adopting a successful worldly life based on dharma. All the rituals and pūjās in Vāstu is also Tantric. So the basic concepts adopted in Vāstu are strongly related with Tantra. My assumption is that one need to have a minimum knowledge about the Tantraśāstra for effective learning of the Vāstuvidyā.

Shape of Vāstumaṇḍala

As per the ancient Vāstu texts the Vāstumaṇḍala needs to be a direction-oriented largest square which can be inscribed in the plot. The size of the building, its facing, shape and dimension of the building must be based on this inscribed square. Many experts suggest that this Vāstu maṇḍala can be triangular, circular or even rectangular, but I categorically negate this argument and assert once again that the Vāstumaṇḍala must be in a square shape. The philosophy behind this is from “Tantra”. In the Tantraśāstra as well as in Tantric paintings earth is noted by a square shape only. No other shape is used to represent earth. In the physical plane too only the square shape can effectively represent the four cardinal directions: east, west, north and south. All other shapes create ambiguity in designing as all the mathematical proportions of perimeter (chuttu) used in Vāstu is based on the directions.

Segmentation of Vāstumaṇḍala

According to the Mayamata, the Vāstumaṇḍala can be segmented into smaller squares using one to thirty-two
vertical as well as horizontal lines according to need for designing a village, a town or a building. This is also yet another theory based on the Tantra. The Tantra explains the whole of universe in thirty-six tattvas and out of that the thirty-first tattva is māyā and thirty-second tattva is Śuddhavidyā. So the maṇḍala too is divided on the basis of above theory. In Śrīvidyā upāsanā of ultimate Tantra, the Merucakra is represented with a square base and extends to a point in the tenth level showing attainment of Tripurasundarī. The square shows earth and the point (bindu) represents point of self realization which is the tenth level. On the basis of above theory, maṇḍalas segmented by 8, 9 and 10 vertical and horizontal lines are mostly considered for village planning, residential and temple designing respectively. Here 10 represents infinity or point of self-realization and 9 represents māyā which is the cause of our feeling of existence; 8 is further down level of solidity.

**The concept of Vāstuṣuṇa**

The mythological story of Vāstuṣuṇa is an excellent example of narrating a principle to an ignorant in a very effective way. The Vāstuṣuṇa inside Vāstumanḍala lies with head towards north-east and limbs towards south-west. The east west central line is Brahmasūtra, north-south central line is Yamasūtra, north-east to south-west line is Karnasūtra and south-east to northwest line is Mrtyusūtra. In fact the line passing from north-east to south-west turns to be the central nerve passing from mūlādhāra to sahasrāra of Vāstuṣuṇa as shown in the figure.
The seven cakras as mentioned by Patañjali’s Yogaśāstra

1. Mūlādhāra
2. Svādhiṣṭhāna
3. Manipūraka
4. Anāhata
5. Viśuddha
(6) Ājñā
(7) Sahasrāra

can be identified on the Karnasūtra of Vāstu maṇḍala. The most interesting thing to be noted is that the first signs of life generated between Mūlādhāra and Svādhīṣṭhāna in living beings, likewise the first vibration of generation of a structure will also be between Mūlādhāra and Svādhīṣṭhāna of Vāstupuruṣa which is in south western corner of Vāstu maṇḍala. So this can be one of the reasons for selecting south-west corner for Svādhīṣṭhāna (installation of first peg as well as place for foundation stone laying). The reason for selecting north-east or south-west sector of Vāstu maṇḍala for building construction is also the same. The major part of building needs to be located over the so called body of Vāstupuruṣa.

The 53 deities in and around the Vāstu maṇḍala may be representing different energy levels inside an independent maṇḍala. Each names of devatās as well as the area occupied by deities are easy way giving directions to the illiterate to design a building by allocating different rooms for different purposes. In this universe the basic constituent of all living and non-living beings is the same, so there is nothing wrong in comparing human body to a place where a shelter is being made to protect the same human body. This means that all the constituents in both cases may have similarity.

One more thing to be noticed is that, if you examine the names of devatās, those mentioned in the east side of Vāstu maṇḍala represents deities of Dawn and in the west reflects deities of Dusk. Deities on north show devatās of Birth and on the south reflects deities of Death. This shows that the Vāstu maṇḍala itself is a prototype of universe comprising of all activities in vicious universes.
THE SCIENCE OF VāSTU PURUŚA

The mathematical proportions in Vāstuvidyā are being formulated on the basis of four directions, east, west, north and south, north-south, the direction of axis of earth, and east-west, the direction of revolution of earth. The only figure which can represent these features perfectly is square. This may be the reason of considering the Vāstumanḍala as the biggest square inscribed in a plot in main four cardinal directions.

The axis of earth may be created by a force which stabilizes the system of stars and which can be noted as pole star in modern science or as Dhruva star according to Hindu Astronomy. The lateral movement of earth around sun is
the result of its the centrifugal and centripetal force.

The combination of these two may create a resultant force from southwest direction to northeast direction which can be called by the name Karṇasūtra. This axis of resultant energy becomes the backbone of Vāstupuruṣa and other powers (deities) stood over this conceptual figure. Through these explanations I would like to emphasize once again that Vāstupuruṣa is not simply a story or a pattern or a myth adopted for easy designing but it carries a lot of hidden tattvas in it. One more thing to be noticed is that in all cases related with Vāstu we need to consider true geographical north based on sun only rather than the magnetic north shown by compasses. The theory of magnetic field may not also evolved in those days of formulation of these theories.

Ultimately the Vāstuvidyā is a technic which is used by ancient India to condition the mind of humans by making certain arrangements in the physical plane he lives. The subtle changes Vāstu makes in life can be explained through the experience one attains by living there. It is a very difficult task to explain the theories under pure logic due to the vastness and depthness of its philosophy. The effectiveness of Vāstu, ultimately depends on the efficiency, intellectual capacity, spiritual discipline and calmness attained by the practioner and his grip over the philosophical background of Vāstuvidyā.
FEATURES OF DEVATĀPRATIMĀ (GOD’S IDOL IN THE TEMPLE) AS DESCRIBED IN THE MĀṬISADBHĀVA, A ŚĀKTA TREATISE OF KERALA

MAGIEJ KARASINSKI

The term ‘Tantra of Kerala’ indicates a plethora of complex, interweaving ritualistic and speculative traditions. Kerala has been praised by scholars as a rich source of traditional knowledge domains. Yet, Tantric traditions of the State, with their voluminous scriptural data, still remain fairly unexplored by modern researchers. The Tantric canons preserve not only ritual peculiarities and philosophical ideologies but also deal with architectural details of sacred buildings and prescribe rules for preparation and consecration of idols worshipped in the Hindu temples. There is a common belief, cherished by the followers of Tantric cults, that while the transcendent form of a deity is unrealizable for a devotee one can worship the divine present in sacred images. Through a ceremony of installation and consecration, the images are transformed into receptacles of divine energies (śaktis). From the time of consecration the god is constantly present in his images. Indeed, an image (pratimā) becomes the god himself (devatā). Here one can quote a statement of B.C. Bhattacharya who declares that according to Hinduism, an icon is not only a representation of a deity but the image is meant for devotees who want to meditate on their chosen
god (but are unable to visualize him mentally) and to become one with him.¹

The aim of this paper is to remark on characteristic features of devatāpratimā (God’s Idol in the temple) as indicated in a Tantric treatise entitled Māṭisadbhāva (MSB). MSB is a Tantric ritual handbook composed in all probability in c. 11th-15th centuries by unknown author who claimed to be well-versed in Śaiva and Śākta scriptures. The text has not been critically edited and is preserved in form of palm-leaf manuscript. The manuscript of MSB in Malayalam script is available in Trivandrum Manuscript Library (mss. no. 1017a, 13377). The importance of the data drawn from this source can be gauged from the distinctiveness of MSB as a rare example of Śākta text of Kerala. Therefore a study of the text can bring to light some details related to the unique styles of temple architecture in Kerala and construction or consecration of the idols. The present paper is based on the fourth chapter of MSB which deals with installation and features of devatāpratimā.

The text prescribes that images of gods should be prepared by experts (śubha śilpin) versed in iconography.² It is noteworthy that, according to the same passage, these artists ought to be skilled craftsmen who have studied architecture and are still young and careful [śilpibhiś-śilpaśāstrajñair yuvadbhiścāpyatandritaiḥ ( . . . )]. In this respect it is worth to quote Vasudeva Poduval who states that most of sculptors of Kerala were artists, not merely carvers and their work was always marked by originality.³

MSB prescribes several materials that can be used for the production of idols.

Basically, an idol can be made of rock, clay, iron or wood.

aśmanā mrtākābhirvā lohāirvā dārunāthavā dhātubhirvā prakartavyā devatāpratimā budhaiḥ/

(MSB 4.1)
Here it is only proper to cite Niharranjan Ray who states that according to Indian beliefs the material out of which sculptures are made (be it a boulder of stone, a lump of metal or a log of wood) is an object of a passive, inert matter, a part of organic scheme of things. Once it is cut out of natural ambiance it is no longer filled with primal, wild and everlasting energy that unites and sustains the human universe. However, the artist’s own creative power can be set in the material and the image may be shaped according to the imagination of the craftsman.\(^3\) Perhaps therefore one may suggest that the object uprooted from organic scheme of things is relocated by the artist in the divine scheme of things and it may reflect higher truths that are otherwise unattainable for ordinary humans.

According to MSB there are specific rules stating how to choose the proper material for an idol. Having decided what kind of material he may use, the wise man should wait till the proper time marked by all favorable signs. It should be a day of moon’s increase (śuklapakṣa), a lucky hour blessed by auspicious star (sumuhūrta sunakṣatra). On that day the wise man should chant the ‘bird-hymn’ (probably RV I.164.20) in four quarters of the world and afterwards enter a forest with a solemn vow to find a proper material for an idol.

\begin{quote}
sumuhūrte sunakṣatre śuklapakṣe gurustadā
nimittaiśobhanairgacched viprāśirvacanaissaha
prācīṃ prāpyāthavodīcāmaiśānīmathavā diśām
japtvā śakunāsūktantu praśedvipinam punah
\end{quote}

(\textit{MSB 4})

One should search thoroughly the surrounding area but, according to the text, there are places more auspicious than others (e.g. holy groves, banks of rivers or holy mountains) where an artist can locate the proper objects. There, one can find stones that are charming (\textit{manojña}), one-coloured (\textit{ekavarna}), smooth (\textit{sama}), resplendent (\textit{snigdha}), immers-
sed in water (sarītasalīsalasambhūta) and unmixed by other colors (varṇabheda-vivarjita). All these above mentioned qualities are attributed to the best kind of stone that can be used by a craftsman. The stones are later classified into young, old and middle-aged (śilā tu trividhā jñeyā bālā vyddhā ca madhyamā) and should necessarily be white, red, yellow or black in colour (sitā raktā tathā pītā kṛṣṇā yathākramam). Such meticulous taxonomies of building materials are indeed frequently found in Hindu literature that was later referred to by those who erected and consecrated temples in South India.4

If an idol should be made of wood, the text explains, one should search for particular trees. Indeed, the trees may be divided into castes (caturṇāmaḥ varṇāṇāṁ vṛksahedastvathocayate). Hence, Madhuca (Jonesia Asoka), Candana (Sandal wood), Śīrwāka (Bilva tree), Śāmi (Mimosa suma) are considered as trees of the twice-borns or shall we say twice-borns among the trees. Obviously, there are certain trees that should never be cut down. MSB teaches that one should avoid trees that are burnt with fire (agnidagdha) or dried up (śuska). The craftsman must also check if the tree is inhabited by any supernatural being (yaksaraksanīṣevita) and if so, he should leave the place immediately. Trees growing near swamps or other damp areas should also be avoided. Once the choice is made, the wise man should clean the area and sprinkle it with sanctified water. Hereafter he may invoke Śiva and Ganeśa and ask them for help and benediction. Then he should prepare a fire ceremony. He must feed the sacrificial fire with various oblations and bless the area with protective spells and piṅgala sūtra (agnikāryam punah kuryādbhahunivesu mantravit kavacena piṅgalenaiva sūtra-kṣetyābhimantratv, MSB, p.18). The rite should be followed by offerings for the tutelary deity (kṣetrapāla) and spirits living in the area. Having done so, one should stay one day at the place chanting proper mantra at night before falling asleep (ekarātram vasettatra svapnamantram japettadā). The
mantra is given as: namaśśambho trinetraya pingalāya mahātmane vāmāya viśvarūpāya svapnāhīpataye namaḥ. The text states that one should remember his dreams that may occur during that night and a spiritual master may deliberate on their meanings afterwards. If any bad omen was seen in the nocturnal vision, additional offerings should be given to the deities (svapne sarvāni kāryāni śubhāntyapya-śubhāni ca tatah prabhāte vimale guruḥ svapnam vicārayet śubhe siddhāntyabhīsmāni aśubhe homayerchatam MSB, p.18). Only after that one can chop the tree and carry on with other preparations. The text continues to narrate various methods of preparing clay and finally constructing the idol (here called bimba) which should be filled with herbs and gems before the ritual of consecration is completed (sarbavijñāni dhātūni ratnānyausadhayastadā bimbamadhye viniksipyā vidhivatparikalpayet MSB, p. 20). The idols, as described in the same chapter, can also be divided into several categories and should be conveniently measured by aṅgustha (thumb’s breadth) or vitasti (measure defined as a long span between the extended thumb and little finger). The text specifies the dimensions of idols giving detailed information on proportions and size of various details. Thus, even minor parts of sculptured bodies must have specific measurements, for example the proper size of ankles should be two aṅgulas and feet may not exceed the limit of fourteen aṅgulas (vijñeyau dyaaṅgulau gulgphau pādau catundasaṅgulau, MSB, p.25). Similar instructions and rules are commonly found also in other Indian treatises on architecture. Thus, for example the prescribed features of holy idols are in agreement with traditional laws stating that an image should be smooth-jointed (susliṣtasandhi) and not showing any crossing of joints (nigūḍha sandhikarana). There one can also find a general rule that the figure shall be portrayed in balanced pose; his or her apparel, ornaments and weapons must be harmonized with the bodily expressions. It is clear from the general descriptions found in MSB that it was of
utmost importance for an artist to translate the religious and mythological concepts into worshipable figures.

MSB states that the main image may be placed on pedestal (sthañnila) with representations of various groups of divine or semi-divine beings (gaññā bhūtāstathā hrasvāstundilā bṛhadānanāḥ rākṣasā bhīṣanākārāḥ karālāḥ paṇikirtitāḥ MSB, p. 25). As mentioned by Vasudeva Poduval, the elegant images of gods found in temples of Kerala have significant aura of vitality and at the same time they possess distinguishable poise and grace. J.H. Cousins added that the sculptures of Travancore can be called realistic (in the sense of the term as used in Western iconography); but, on the other hand, they are mystical because of their "tangible expression of intangible ideas."

It is only in the subsequent chapter of MSB that the general remarks on iconography and preparatory techniques are supplemented by a detailed description of a goddess image, the one known as a solitary heroine (athaikavīrim pratimāṃ pravakṣyāmi samāsataḥ, MSB, p.26). While in the fourth chapter we could find detailed explanations of preparatory actions, classification of materials, and measurements of images, the fifth chapter gives us a vivid and poetical description of the goddess, as she should be imagined and represented. The divine heroine is the one who killed a demon Ruru, a general of Dāruka's army and the legend about her exploits is summarized in chapter nineteenth of MSB. Moreover, the great battle between the goddess and demons is also alluded in Brahmavāmala text which again is frequently referred to by the author of MSB. The text (i.e. MSB) warns that only a dedicated adept who is an expert of mantras can perform rituals related to the goddess cult. In case of goddess who is called the slayer of Ruru there are serious dangers for a person who wants even to contemplate on her image. In fifth chapter of MSB we read:
evaṇṛūpā jagaddhātri nipātya rurudānavaṁ bhītvā śūlenā hṛdayaṁ mukhe tasyārpitekṣaṇā/
na kuryāduṛdvaḍṛśṭiṣca nādhodṛśṭiṣca desikaḥ//
ūrdhvadṛśṭyā bhavennāśamadhadṛśtyā bhayaḥ bhavet/
samadṛśtyā bhavenmṛtyustasmāttatparivarjayet//

MSB 5th chapter.

In this form the mother of the world having killed Ruru the Dānava, having pierced his heart with a spear, the guru having fixed his eyes on her face should not look upwards or downwards. If he looks upwards he will be destroyed if he looks downwards he will be scared. If he looks on the whole scene equally he will die, thus he should avoid that.

In later passages of MSB one can find similar dramatic descriptions of the goddess who is frequently called a lonely warrior queen.

dārumasya vināśarthaṁ nirmitā viśvamūrtinā
dheṣvaralāme tu ekavīrī vinirgatā
dralayāmbudanirghoṣa pralayānavāvarcasā
dralayānilavegā ca mahāmāyā parāparā
dhanena dārukan hatvā kim brūhi vada śaṅkara

Having many forms, created to vanquish the demon Dāruka a solitary heroine who came out of the head of the mighty god (being) the sound of the clouds of destruction, the lustre of the fire of destruction, the vehemence of the wind of destruction, higher and lower (force) of the great illusion (māyā) having killed Dāruka in an instant what then? Tell (us) O Śaṅkara!

The text portrays the goddess as a fierce lady of dark complexion, even darker than storm clouds (Kālāṁ vṛṣītaka-ławenganivahair varnena). She is invincible, agitated by anger (roṣoddiptā); but on the other hand she is also a compassionate mother who protects her devotees and heals
their distress (duḥkharā). She is always gracious (saiata bhadrā) but she is also praised as Mahābhairavī: a formidable heroine who holds a club, a trident and a sword in her hands (khaṭvāṅgatrisikḥānasīṃca dadhaiṁ vande mahābhairavīṁ MSB, p.27). The poetical stanzas concluded by prayers and benedictions supply a craftsman with detailed instructions on the construction of the image of the goddess. However, the artist has a considerable freedom of composing the whole idol according to his vision and to induce a flavor of originality into his work. Thus, for example, the terrifying image of the goddess can also indicate her inner power of creativity, the evident passion and willingness to lead the devotees to salvation at any cost. Such ambiguities of the divine characters may be reflected in the artistic form. The images of the goddess who killed Ruru and Daruka can be seen in the temples of northern Kerala: in Māmayikāvu, Kalarivammukal or Nileśvaram. There one can notice how these poetic expressions of devotion found in Tantric texts were translated into the realm of iconography.

The chapters of MSB summarized here give us examples of rules and laws for preparation of idols. One should remember that the text is not an opus devoted to iconography only but a Tantric manual dealing mainly with ritual matters. However, even in a Tantric handbook one can find interesting stanzas on idol making. While reading one can find in the text a curious tension between strict rules of iconography and the call for an artistic freedom to fashion the idol according to his imagination.

Let us conclude with a quotation from Rene Guenon who once remarked that:

Humanity attempts to embody in a tangible or otherwise perceptible form, we may say to materialize, what is in itself intangible and imperceptible. It makes symbols, written characters, and cult of images of earthly substance and sees in and through them the spiritual and divine
substance that has no likeness and could not otherwise be seen.

(Rene Guenon, *Du Pretendu Emprisme des anciens, Le voile d'ñsis*, CLXXV, 1934)

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1. (... in case of another Sanskrit word subba of which the later meaning is "lovely" there may be cited the expression subba silpa from the Ramayana where the reference is certainly not to a craftsman personally "handsome" but...


5. Radhakamal Mukerjee, Cosmic Art of India, Delhi, 1965, pp. 54–58.


Temples or prāsādas are abodes of gods, built of durable materials, which impart happiness to human beings. Timber has been used as a building material since the Vedic period. Kerala is rich and abundant in timber and temples of Kerala are a treasury of elaborate and intrinsic wood carvings. It is seen that structural temples in Kerala originated in the early years of the ninth century as per evidence. Temple architecture has experienced a series of development both in form and in interiors through the years. The development in wood carvings had reached its zenith in the late phase. Concentrations of wooden temples are mostly in the districts of Alleppey and Kottayam. Temples like Kaviyur Śiva Temple, Kandiyur Śiva Temple, Mahadeva and Narasimha temple at Chengannur, Kuttanperur Karthiyaini Temple, Śiva Temple at Vazhapalli, Ettumanur and Vaikom showed extensive works in wood. In such temples even walls are made of timber, bearing beautifully carved panels devoted to various epic and puranic themes. But the adhiṣṭhānas are built invariably of granite mouldings. The roofs are made of timber although some times covered with copper sheets which must have constituted an important item of import in the Kerala’s maritime trade. Generally, the copper sheets have been nailed with the timber built roofs, obviously to protect the joints and stop leakage of rain water. The roof construction
technique followed is not the same throughout. Sometimes tiles were spread over a wooden frame, the constructional method of which has been dealt with in the various Šilpa-texts like the *Tantrasamuccaya*. Bricks did not gain popularity in Kerala temple construction largely because of the easy availability of blocks of laterite and timber.

**Classical sources of temple design**

The classical treatise in temple construction in Kerala are the *Tantrasamuccaya* by Cennas Manakkal Narayanan Namputirippad (15th century) and *Śilparatna* compiled from the ancient Šilpa and Agama works by Śrīkumāra’ (16th century). The *Tantrasamuccaya* is in 12 paṭalas and the Šilpabhāga speaks about the temple construction. The text *Śilparatna* is divided into two parts—the first part consisting of 46 chapters on the construction of houses and villages along with other subjects and second part consisting of 35 chapters on iconography and related topics. Also important are Mānasāra, Mayamata, Īśānaśivagurudevapad-dhati, and Prayogamañjarī, and Tantraratnavali. The chapter 56 of the *Bṛhatśamhitā* Varāhamihira (6th century) deals with the prāsādalakṣana and treatment of temple architecture. The *Thachuśāstra* defines the temple layout and ritual procedures.

**Temple design principles**

The classic temple known as Ambalam or Kshetram or Tali has a Śrīkovil as its nucleus. The Śrīkovil may be round, square, rectangular, elliptical or apsidal. The temple normally faces the east. The structure above the adhīsthāna (from plinth to spire) is called the *Vimāna*. Some structures are small and single storeyed namely *Ekatala* which is most popular. There are even two-storeyed and three-storeyed structures called *Dvitala* and *Tritala*. The upper levels of the Śrīkovil are not functional, but their role is to give a visual dominance. Temples are designated as *alpaprāsāda*
and *mahāprāsādas*. Temples up to three storeys and the width up to 16 H is said to be *alpaprāsādas* and structures more than three storeys and width up to 64 H is called *mahāprāsādas*. (One Hasta H=24 aṅgula, one aṅgula is standardized as 3 centimeters).

The five-fold classification of temples according to the breadth-height proportions are: 1. Šāntika, where height = breadth; 2. *Pauṣṭika* (height=1.25 breadth); 3. *Jayada* (height = 1.5 breadth); 4. *Sarvakāmika* (height = 1.75 breadth); 5. *Abhuta* (height = twice breadth). The height is divided into different ratios for *adiśṭhāna*, *stambha*, *prastara*, *gīva*, *śikhara* and *stūpi* for the five temples. The *vimānas* are classified as Nāgara, Drāviḍa and Vesara. According to the *Mānasara*, Nāgara *vimana* is square in shape from base to śikhara. The Drāviḍa *vimāna* has a polygonal shape from base to finial and Vesara has circular, elliptical and oval shapes throughout.

According to the *Matsyapurāṇa* the primary shape of the *prāśāda* has a 4x4 grid division resulting in 16 squares. The four cells in the centre form the *garbhagṛha* and the outer cell form the wall (*bhitti*). This forms the Nirandhara *prāśāda*. In *Śāndhara* *prāśāda* plan there exists an ambulatory passage between the inner walls (*khandabhitti*) and outerwall (*bāhyabhitti*) of the *garbhagṛha*. The *Pancaprabhāra* form five successive regions around the shrine, i.e. 1. *antarmanḍala*, 2. *antahara*, 3. *madhyahara*, 4. *bāhyahara*, and 5. *marādā*. These regions are marked with the width of the *prāśāda* as the unit measure (*daṇḍa*). The generally accepted measures are 1, 1, 2, 4 and 7 *daṇḍa* from the outer side of the *prāśāda*.

Timber framed roof construction is categorised into three, i.e. *kośtha*, *sālā* and *subhā*. Kośtha is a pyramidal or conical roof made of rafters resting on the wall plate and joining on a *kūṭa* at the top. Sālā is a gable ended roof. Here the rafter ends are supported on the wall plates at the lower end and the ridge at the top. Subhā roof is a space frame
provided for rectangular rooms. It is a combination of koṣṭha and śālā.

Evolution of Kerala temples

Kerala temples show a distinctive style which is largely an adaptation of the Dravidian style. The style is evolved by the influence of various geographical factors like the high precipitation, existence of dense forests and laterite formation. The political, economic and cultural factors of region has also influenced the evolution of the Kerala temple architecture. The political revival of the Cheras in the 9th century or even earlier coupled with the Bhakti movement provided a great fillip to the building of temples. Kerala temples were square, circular, rectangular, elliptical and apsidal in plan. The circular shrine has adapted certain features common in Northern India and Sri Lanka. According to the Brhadāraṇyaka in the north (6th century), circular temples constitute an important group. The apsidal plan of the temples in Kerala is imbibed indirectly from Andhra and Karnataka and these trends came to Kerala only through Tulunadu which has the highest number of apsidal shrines. Some of the apsidal shrines in Kerala have columns all along the circumambulated passage and the entire arrangement is reminiscent of the Buddhist architecture. The Kerala temples in the middle phase represented an amalgam of two styles- Dravida and Kerala. From outside it is a Kerala temple concealing in its core a small Drāvida vimāna having its own grīva and sikhara. The circular temple with a miniature Drāvida vimāna in the centre, the latter enclosed by one or two rows of columns may be compared with the circular Buddhist temple of Sri Lanka known as Vatadage.

The Kerala temple architecture is divided into three phases: Early (800 AD-1000 AD), Middle (1001 AD-1301 AD) and Late (1301 AD-1800 AD) according to H. Sarkar. Each phase shows an architectural evolution which is simpler at the beginning and becomes more and more elaborate later.
In the early phase the sculptural content was very less. But in the late phase the decorative and the visual arts like wood carving and paintings became prominent.

_Early phase_

The temples of the early phase were square, circular and apsidal in plan. Both nirantara and sāntara temples were in vogue. As a part of decoration recesses and projections were used. The typical layout of this phase consists of sanctum which may or may not be fronted by a namaskāra maṇḍapā and by a cloister enclosure known as the nalambalam. In square temples a small maṇḍapā projects from the larger sanctum. In apsidal and circular temples the space in front acts as a maṇḍapā. Kaviyur Śiva temple, Kandiyur Śiva Temple, Ettumanoor Śiva Temple etc. are examples of temples belonging to the early phase.

_Middle phase_

The temple architecture of Kerala in the middle phase showed developments in the interior arrangement. The temples were square, circular, apsidal and rectangular in plan. The elliptical plan was also in vogue. Many temples of this phase reveal the fusion of Drāvida and Kerala style. Another feature of this phase is the presence of more than one pradakṣīna patha around the Garbhagṛha. In circular and apsidal temples row or rows of columns run along the ambulatory. This concept is absent in square plan. The inner shrine of the circular temple is square in plan both internally and externally. In square temples the Garbhagṛha is square and in apsidal temples the Garbhagṛha is apsidal (prṣṭha). The practice of raising the square shrine over a solid platform and approached by a long flight of steps came into existence. The Madathilappan Temple at Pervanam is an example of this type. _Tritala vimāna_ also came into existence. In this phase, as in the early phase the placing of the detached maṇḍapā did not constitute an essential feature. The number of doors for the shrine was reduced to two or three
and the concept of ghana-dvāras came into practice which is an interesting development noticed. Another additional feature of this phase is the practice of placing a bhūta figure below the pranāla. Graceful figures of dvārapālas are datable to this phase.

Late phase

The temple architecture of Kerala reached its final stage of evolution both in dimensions and in exterior decorations during this phase. Majority of the temples were developed in this phase. Very little development has taken place in the general plan of the individual shrines but the layout of the entire complex has grown into greater elaboration and complexity. Sculptural art and ornamentation became elaborate which proved to be the period of Kerala’s prosperity. The ideal organization of Kerala temple is by the pañcaprākāra of five successive enclosures ie. 1. antarmaṇḍala, 2. antahara 3. madhyahara 4. bāhyahara and 5. māryādā. The layout of the typical Kerala temple is shown in (Figure 1). The central shrine, the Garbhagṛha is fronted by a square namaskāra maṇḍapa with a square superstructure. In some temples, another pillared structure namely the Bālikal maṇḍapa in front of the valiambalam, a wing of the Nalambalam provides the main entrance into the temple. Kootamabalam was also another addition. In larger temples the outer prākāra enclosed the temple tank. Decorative elements like torāṇas were in vogue. The Śāntara vimānas with one or more pradaksīna patha dominated the temple architecture. Temples of this phase are square, circular (fig.2), apsidal, rectangular and elliptical in plan. The Śiva Temple at Vaikkom, exhibits an elliptical shrine with elaborate interiors. Wooden temples with minute carvings from epics and Purāṇas (fig. 3) came into existence in districts of Kottayam and Alleppey. This minute ornamentation of sculptures of Kerala resembles the Hoysala tradition of Karnatakā. The emergence of multi-shrined
complexes was the result of the Bhakti movement. *Tritala vimānas* were in vogue.

![Diagram of temple layout]

**Fig. 1: Temple layout of Kerala**

1. Vilaku madam  
2. Antarāmaṇḍala  
3. Antahara  
4. Praṇāla  
5. Mukhamanḍapa  
6. Sandhara (Ambulatory)  
7. Surrambalam  
8. Namaskāra maṇḍapa  
9. Dvāra gopura  
10. Agra maṇḍapa  
11. Balipītha  
12. Dhvajastambha  
13. Koothambalam

*Timber in temple construction*

There are timber buildings in Kerala which has stood for more than 400 years. R.V. Poduval has stated that the wood work of the Śiva Temple at Katinamkulam near Murukumpuzha belongs to Kollam era 389 (1214 AD). Timber has a
quality to span spaces. The width of the lintel of the door was taken as the key measurement and a kind of module in Kerala architecture. Timber may be classified into four categories according to ancient texts as Antassāra, with hardwood core (jack tree); Bahissāra, with hardwood outside (palm); Sarvasāra, hardwood all through (teak); and Nissāra, with softwood (Muringa). In the classical text Šilparatna, trees rejected for the construction purpose has been mentioned. They are those attacked by insects; have climbing creepers or bear thorns. Lumber should not be taken from trees that are used by Brahmins for worship; always bears fruits or located in the temple precincts. Also the trees standing by the roadside and the graveyard is to be avoided. Trees which are bent, dry and occupied by serpents, oozing water, producing milky sap, uprooted by wind or damaged by fire, trees growing in lakes and wells or at locations that are the meeting place of the rivers with the sea are to be rejected. Similarly trees pierced by the tusks of elephant, struck by lightning are to be rejected. But it is interesting to note that several restricted types like trees with milky sap may be used to build temples. Mixing of many species of wood in a structure is not desirable. The Šilparatna lists the following types suitable for dwellings: Saka (tectona grandis), Asana (terminalia tomentosa), Madhuka (bassia latifolia), Sala (artocarpus locucha), Sarja (vatica robusta), Candana (sandal sirium myritifolium), Panasa (jack tree or artocarpus heterophyllus) and Devadaru (avaria longifolia). The tree has to be felled in the evening (Viṣṇudharmottara). The temple is an image of the microcosm, as shaped from the primordial wood which is Brahman (Stella Kramrisch). The four members of the builder's guild, are Sthapati (master builder), Sūtragrāhin (cord-bearer), Varādhaki who increases (vṛdh) by joining together-stone craftsman and Taksaka (carpenter). Taksaka is one who reduces (taks) large pieces into small parts. He is stated to know the Veda and be skilled in his craft of wood joinery.
(Mānasāra). The text also discusses on the properties of wood and its collection. Trees can be classified into male, female and neuter. The male tree has a uniform trunk width from base to top and without branches and gives cool shade with a pleasant form. The female tree has a pleasant form and provides shade and has a thick base which tapers to the top. The tree is neuter when its trunk is thinner at the base than at the top and does not provide shade. Wood that is male and female may be joined to the same or opposite gender. Neither male nor female may ever be joined to the neuter. The felling of the tree is done during the waning phase of the moon.

**Kaviyur Śiva Temple**

The Śiva Temple at Kaviyur in Tiruvalla taluk in Alleppey district has a circular structure, built of timber on granite adhiśṭhāna. The temple has faced several alterations and the adhiśṭhāna has survived which can be placed in the early phase. From the inscriptions on the adhiśṭhāna it is evident that the temple must have come into being in the middle of the tenth century. The dates engraved on the Kumuda and Kapota are 4051 (AD 950) and 4052 (AD 951).

The temple has a vṛtta (circular) vimāna enclosing a square Garbhagrha. It has an Ekatala vimāna. The diameter of the temple is 10.86 m. The Garbhagrha is surrounded by double pradaksīṇa pathas. The temple is Sāntara type with eight columns in the ambulatory. The circular outer wall made of timber has four openings in the cardinal direction like the Sarvatobhadra type of temple. The Garbhagrha has splendid and excellent wood carvings. Each intricate carving depicts an episode from the Purāṇas.

**Sattankulankarai Narasimha Murthy Temple**

The Sattankulankarai Narasimha Murthy temple in Chengannur taluk in Alleppey district, facing the west is built mainly of wood and it has a sama-caturasra kṣudra-
vimāna with a namaskāra-maṇḍapa in front. It is standing on a maṇca type of adhiśṭhāna. The Garbhagṛha has a roof covered with copper. The temple consists of a square vimāna enclosing a square Garbhagṛha (figure. 2) with a pradakṣiṇa patha all around. At each of the four corners of the Garbhagṛha is a column. The Garbhagṛha too has its own entrance. The adhiśṭhāna of the outer wall (bāhyabhitti) is also of granite, and the mouldings comprise Upana, a short Jagati, Vṛttta Kumuda, Kaṇṭha with Simha mālā and Paṭṭika. Above it comes the vedikā followed by bhitti. This wall is made of wood and it is carved beautifully with various puranic scenes. There are jāli-windows (figure. 3), devakośṭhas and animal friezes on the wall. Above the vedikā runs a frieze of animal procession followed by another horizontal frieze of vimāna motifs. The temple has four functional doors, each one associated with dvārapālas. The carvings on the wall are excellent piece of art showing minute details of the various scenes from Kṛṣṇa lilā, Setubandhana, Putanā- vadha etc. Below the functional door of the northern wall is placed the Praṇāla. It is held in the simha's mouth. The Prastāra of the temple is highly ornate. This is undoubtedly a store house of sculptural art in wood. Considering the stylistic features these reliefs may however be dated to the fifteenth century when the temple in the present form came into existence.

Fig. 2: Square Garbhagṛha
Fig. 3: Jāli window

Fig. 4: Circular Śrīkoviḻ-prañāla
Fig. 5: Wooden Panels with carvings

Conclusion

The temple architecture of Kerala is remarkable for its simplicity. The Garbhagrha has splendid and excellent wood carvings. Each intricate carving depicts an episode from the Purānas. This wall is made of wood and it is carved beautifully with various puranic scenes. There are jāli-windows, devakoṭhas and animal friezes on the wall. Above the Vedikā runs a frieze of animal procession followed by another horizontal frieze of vimāna motifs. The temple has four functional doors, each one associated with dvārāpālas. The carvings on the wall are excellent piece of art showing minute details of the various scenes from Krishna līlā, Setubandhana, Śiva Pārvatī etc. The Prastāra of the temple is highly ornate. This is undoubtedly a store house of sculptural art in wood. Technically the most important
feature of temple architecture is the planning and design principles using dimensional standardization. The dimensional coordination up to the minute construction detail and the explicit wood work makes Kerala temple a unique marvel.

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9

THE MULTIFARIOUS MEANINGS OF A HOME
IN THE CONTEXT OF KERALA

G. RGHUKUMAR

Of all the riches of a land the most important is its cultural wealth. Culture is the quintessence of the achievements of a society in its totality attained through language, literature, education, architecture, politics, administration, etc. One of the significant aspects of any culture is its architecture. It is an art which rests on the foundation of a deep scientific awareness. The present paper aspires to discuss two important questions—which were the original concepts of style of the Keralites in the field of architecture? Has this influenced the architectural designs of contemporary times? And it offers certain directions and indications for the future developments in the field.

The paper comprises three sections. The first is a brief summing up of the Malayalee notions of a house. A discussion follows on the styles adopted by Kerala in the past in the field of artistic constructions and the mental, materialistic and ecological aspects related to it. An enquiry into how Kerala lost its artistic and ecological awareness in its architectural concerns follows. The paper is concluded with certain innovative directions on how art, science and ecology can be threaded to conceptualize the architectural concerns of the future.

As far as a Malayalee Keralite is concerned, a house is not just a place of residence. It is a space that calls you back
again and again. Each individual is continuously addressed and called back in a voiceless language by his/her house. The ears of the soul are constantly tuned to listen to this language. This happens to be an innate truth. As in the case of the word ‘mother’ or ‘mā’, a house also has multifarious meanings about it. From the moment of birth through the naturally sweet childhood and highly relished youth, an individual’s identity and all basic awareness regarding notions of love and concern, friendship and cooperation is built on the foundation of the home from where the individual comes. Thus a home, which is the embodiment of all natural goodness is precious to each individual. Clear norms regarding the construction of a house—the where and how of it—were very much alive right from the distant past. Mahāmanuṣyālayacandrika clearly details out the concepts of a house, a family and a village thus:

\[ ekameva dvijāgarām tat kutumbasamanvītam \]
\[ ekabhogaṃ bhavegrāmanī tat bhṛtyāyātanaupītam. \] (60)

That wholesome space can be called a village (‘grāmam’) where one resides with his wife, children and relatives, and with his servant community in those buildings suitable for each. This in turn can be reckoned a family. That space where one can reside with one’s near and dear ones observing the right kind of rituals can be called a home. The Manuṣyālayavidhī refers to the land which is most suited for man’s residence:

\[ laksanamekakutumbasyālpam \]
\[ parayunnathundu vidhīna njan \]
\[ nalla niram saurabhhyam \]
\[ svadullatumuttamam nṛnāṃ bhūmi. \] (9)

The land with the right kind of soil—dark, sweet smelling, and tasting good—is most suited for residence. The place
meant for construction must be fragrant. The terrain and the tilt of the land were also paid much heed to. The most ideal place for the construction of a house is the land slightly tilted to the east facing the fields and with water flowing eastward in such a way that it can be checked with one's right hand. The Manusyālayavidhī specifies the traits to be sought after for a place of residence:

\[ \text{vīprannuthara dikku thanathu subham, poorvanatham kshatriya nellarkkumsubhamakayundithu yameneecham thulom ninditham madhyam varunadikku thanathu pumanoothikka kanyanatham bhoomikkingane naluvvarnanilayam veppanulam lakshanam.} \]

(11)

The land tilted to the north is especially good for Brahmins and the land tilted to the east is excellent for residence for all. As per the Vāstuvalabha astrological harmony essential for matrimonial matters is equally applicable for the construction of a house.

\[ \text{yaduktam gaṇayonyādi sarvam dāmpatyakarnaṇi tat sarvāpi saṁcintya bhuvī gehavidhau mitha} \]

The Manusyālayavidhī dictates that the land has to be looked upon as a female and the house as the male and the horoscopic harmony to be analysed accordingly.

\[ \text{vedikā vanitā caiva grahān tatra varo mataḥ ubhayormitha saṁcintyam gaṇayonyādikam subham.} \]

(24)

Behind all actions rituals or 'pūjā' and meditative ponderings were especially the norm in Kerala. This helped to reduce haughtiness and pride in man and to maintain faith and instil a healthy fear in the minds of all. The concept of Vāstupurusa emanates from the concepts on directions or 'dik'.
The way Vāstūpurusa laid himself down to rest was taken seriously in the construction of houses in Kerala. Most works carry concepts and thoughts which could be marked ancient, superstitious and tainted with clear marks of Brahmin ascendancy despite the prevalence of certain truths in them.

All kinds of faith are superstitious and a blind obedience to any faith is illogical. Being sceptical of everything again is not a virtue. Faith must be manipulated as an inspiring force and thrust to all actions. In Keralite Vāstu concept there were many rules and concepts which were capable of inculcating wisdom in man.

Many ancient houses in Kerala are proud landmarks of the vāstu art tradition. In this art of construction in addition to intricate and embroidered artistic work certain rigid mathematical calculations were observed. Woodwork for roofing would be done on plain ground as the construction of the walls would proceed nearby. The calculation for wood work had to be perfect and exact for the different pieces of wood to dovetail atop the walls of the house to form the base for roofing. The senior carpenter who managed all the calculations without fail was called ‘kanakkan’. ‘kanakku’ being the term for mathematics in Malayalam. ‘Uttaram’, ‘kazhukkol’, ‘vala’, ‘dwaram’ all had to maintain the right proportion, the failure of which would lead to the ‘uttaram’ failing to get seated atop the wall. With great technical and mathematical expertise and with deep meditation and prayers the ancestors of the present Kerala community engaged themselves in the art of house construction. That again accounts for certain similarities perceived in the construction work of houses and other buildings of those
times. A remarkable fact which is worth mentioning is that all these constructions were basically eco-friendly and environment-friendly leading to the well being of man and nature.

With the passage of time and intrusion of modernity drastic changes entered the thought processes and actions of modern man. The availability of cement and the nuclear family norms usurped the age-old practices and styles in house construction and all god-fearing sacred styles of functioning gave way to a materialistic mentality. Population hike, excess of illegal wealth, denial of tradition and erosion of values led to an absolute loss of mutuality. The stream of traditionally inherited knowledge slowly dried up without flowing into the minds of the new generation. The modern reckoned themselves wealthy with the knowledge of mechanical and IT skills. Value-based cultural notions of life have given way to this new knowledge, the hallmark of which is selfishness.

As in many other fields modernity affected changes even in the *vāstu* art. The divinity associated with a Malayalee house slowly eroded. This juncture in history demands discussions on the basis of our lost culture and the multifarious meanings of a house. Globalization and IT revolution have happened and the consequences of these have started gaining clarity. Modern times demand a merging of the achievements of new knowledge retaining well the virtues of our tradition.

The sense of unity and togetherness is lost. India was once a land of unified thinking. The unity emanated from the unifying strength of a tradition-based culture, denying all geographical variance and limitations. Today the light of unity has been put out by globalization. The sense of cultural mutuality which remained a strong binding force between men enabled them to discuss and rectify their mistakes. This has totally been erased and privatization has become the watchword in all fields of activity including the lives of men.
Competition started dominating all arenas of activity.

A person deprived of social relations and societal awareness is difficult to be brought under control. The people are least aware of what is called a healthy fear of society. Fellow beings are of least concern to modern man. Such people ought to be persuaded to behave favouring the land, culture and nation to which they belong for which they have to be brought under the control of governmental authority and observation.

Everything positive that is seen around is a creation of some meaningful cooperation. Art becomes practical through friendly relations. In a crowded desert deprived of the coolness of friendly relations, who can stand as the watch and ward of art, architecture and cultural values? A temporary system shall not suffice.

Modern man goes on constructing buildings with the money he has. Appropriate thought and discussion never enters into the making of it. When the small and pretty state of Kerala which was once the playground of prosperity and a proud culture is transformed unscrupulously into a cement forest without any artistic grace and elegance, firm and keen interference ought to be made.

The French thinker Michael Foucault had developed the notion of Panopticism. This was based on the design of the prison-house developed by the Englishman Jeremy Bentham. Public surveillance system which is rampant in controlling the traffic on streets and the monitoring of people who visit shops are all based consciously or unconsciously on the principle of panopticism. Rigid public surveillance is the only remedy to bring even the hostile construction of buildings in this land under check and control. Buildings constructed without any logical principles, thought and art must be caught by the eyes of a camera and people responsible for the violation of environmental, ecological, traditional and cultural values with reference to construction must be severely brought to task and compelled to effect
corrections. All future constructions must be in accordance with the tradition, culture and environmental factors of a state. When such a norm is made rigid in all states the beauty and tradition of each region would be preserved without fail which would definitely be an invaluable suggestion for the present seminar to put forward.

To sum up all the matters discussed so far:

(1) In Kerala since time immemorial all actions were preceded with ritualistic prayers and offerings.
(2) Kerala had its original concepts on vāstu art, and faith in the lying posture of vāstupuruṣa.
(3) With the onset of modernity, by the 1960s, there arose a tendency to deny traditional values and to proclaim freedom in all areas of activity.
(4) Globalisation and the revolutionary advance of the modern Information Technology estranged the invaluable folk tradition and the natural flow of knowledge from folklore.
(5) Folklore was the essence of the unity of a community whereas modern knowledge is the essence of selfishness.
(6) All modern constructions set apart the identifying hallmarks of national, regional, environmental and traditional concepts on construction.
(7) Capturing the virtues of contemporary knowledge and linking it with the positive aspects of traditional vāstu art a new construction strategy has to be formulated. This is a crucial need of contemporary times.
(8) Governmental interference is most essential in this matter, and that too on a war footing. Strict surveillance and proper guidance to the public ought to be ensured.
(9) A construction art has to be formulated ensuring the fulfillment of a Keralite order enabling the
appropriate changes for the use of it by all sections of the society. Following the same path all the states can develop their own construction art and strategies thereby enabling a regional and cultural identity through the construction of homes and buildings.

The presenter of the paper hopes that the seminar would put forth certain suggestions towards the achievement of such a cultural identity in the field of construction of houses.

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VĀSTU CONCEPTS IN ARTHAŚĀSTRA

LALU S. KURUP

The Sanskrit word vāstu means a dwelling or house with a corresponding plot of land. Śāstra means science, doctrine, teaching, etc. In a broad sense, vāstu is an ancient Indian science of Architecture and building which helps in making a cogent setting or a place to live and work in a most scientific way of taking advantage of the benefits bestowed by nature. Vāstu combines all the five elements of nature and balance them with the man and material. It also unifies the science, art, astrology and astronomy. This help, us to make our lives better and will secure from things going wrong.

The foundation of Vāstu is traditionally ascribed to the mythical Sage Mamuni Mayan. We can see the theories of Vāstuśāstra in the works of Śilparatna, Thachuśāstram, Manusyālayacandirka, Samarāṅgaṇasūtradhāra, etc. From these works, we can retrieve how to construct roads, houses, temples, palaces, etc.

Though the well known ancient Sanskrit work the Arthaśāstra is popularly considered to be an ideal text of state and politics, it sheds lights on the field of Vāstu also. In its present form, Arthaśāstra consists of 15 large sections called Adhikaraṇas, 150 adhyāyas, 180 sub-divisions styled Prakaraṇas and 6000 ślokas. In the second Adhikaraṇa of
this work named *Adhyākṣapracāra*, Kauṭilya holds the relevance of Vāstu in constructing buildings in urban and rural areas. This paper aims to collect the Vāstu doctrines in Kauṭilya’s *Arthaśāstra*.

**Structure of Villages**

In the Mauryan period, the local unit of administration is called Janapada. In the *Arthaśāstra* the first chapter that is, Janapadaṇivesa begins with an advice to the ruler, how to set up a good Janapada. According to Kauṭilya, the Janapada belongs to the people brought either from the excess populated area of the kingdom or from adjoining areas. The range of families in each Janapada were varied from 100 to 500. The majority of population in Janapada were the Śūdras engaged in cultivation.

The Janapada unit had a size of one to two *krosa*. The geographical indication including rivers, mountains, hills, trees were bases for demarcating the boundaries of a Janapada from one to other. In the 19th Prakaraṇa of *Arthaśāstra*, Kauṭilya tells about the boundaries of villages. The well-planed entry gates were built in the four directions of each village. The self-sufficiency and progress of the Emperor largely depends on the cultivation and other agriculture based activities of each Janapada. Therefore Kauṭilya gave importance to the routines of people in the Janapada.

**Township Construction**

According to the *Arthaśāstra*, township had a vast size of 1000 *danda* to 2000 *dandu* cm. The township carries state capital which constituted the middle of 800 Janapadas. The township was adjoined with Dronamukha, Kharvadika and Sangrahaṇa.

**Forts**

Forts are the manmade obstacles to defend external
invasion. According to the *Arthaśāstra*, there are four types of forts (*durgas*). They are *audaka, pārvata, Dhanvāna* and *Vana*.

**Durgas**

It is the prime duty of the king to build store rooms for the storage of grains for future use. The *Vāstu* principles are to be considered while finding place for grainhouse. These houses were either square or circle and near the river. The forts protected the grainhouse and Kauṭilya’s *Arthaśāstra* reveals more about the construction of forts.

**Walls**

The forts are encircled with long walls. Soil and rocks are mainly used for constructing these walls. Poison creepers are planted on the sides of walls. For chariot transportation, roads were constructed on the top of the walls. Kauṭilya prohibited the use of wood for the construction of walls.

**Royal Passages**

The details of royal passages were narrated in the 22nd Prakāraṇa of the *Arthaśāstra*. According to Kauṭilya an ideal state must have six main passages. Among the six passages, three were constructed to connect the east-west province and the other three were connected the north-south parts of the state.

**Rājaniveśa**

By considering the roots of *vāstu*, Kauṭilya recommended that, the royal palace (*rājaniveśa*) was located on the northern part of the capital city. The north and east sides of the *Rājaniveśa* were used for building the residence of the *puropitha* and ācārya. The south and east sides of the *Rājaniveśa* were used to build rest houses for elephants. The Kṣatriyas can use the east side of the Rājaniveśa for constructing their residence. The Vaiśya houses were
located in the southern part of the state.

Crematorium

Kauṭilya prescribes building separate crematoriums for different castes. The crematorium for the upper caste people were built on the north-east side of the Rājaniveśa. But the crematorium of Śūdra community were situated on the northern part of the Janapada.

Conclusion

From the above narration, it is very clear that, the Mauryas showed special interest in the field of Vāstu. They gave due importance to the environment and yielded special attention to the construction of their buildings to make them eco friendly.

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TEMPLE ARCHITECTURE IN ĪŚĀNAŚIVAGURUDEVAPADDHATI AND NATIVITY OF ĪŚĀNAŚIVAGURU

K.S. BINDUSREE

Kerala’s contribution to Tantra literature in Sanskrit is great. Kerala is a land of temples too. Tantra texts deal with temple architecture. The Prapañcasāra of Śri Śaṅkara, the Prayogaṇamañjarī of Ravi Nambutiri, the Īśānaśivagurudevapaddhati (ISGP) of Īśānaśivaguru and the Tantrasamuccaya of Chennas Narayanan Namputiri are notable contributions of Kerala in this field. ISGP follows the Śaiva Āgamas. ISGP is also called Tantrasāra, Tantrapaddhati, Siddhāntasāra, etc.

Identity and nativity of Īśānasivaguru are matters of conjecture. The present paper is an attempt to make a brief analysis of the temple architecture dealt with in the ISGP and to relate the same to Kerala temples with a view to determining the author’s native place.

Date

The ISGP follows the Śaivāgama-tradition. The Jayākhyasamhitā is the earliest scripture which makes mention of Bhūtaśuddhi or purification of the elements in connection with the use of pots for abhiseka or consecration of temples. The procedure of bhūtaśuddhi mentioned in Jayākhyā is accepted by Somaśambhu in his Tantra text Somaśambhupaddhati which is followed by the Śaivas along with the ISGP. Somaśambhu was an abbot of the monastery of Golaka in Tamil Nadu. His date is second half of the eleventh
century. Somaśambhu is mentioned and followed in many respects by Īśānaśivaguru. So Īśānaśivaguru can be safely located after eleventh century AD. It is believed by many scholars including Dr. N. P. Unni that he lived in the twelfth century AD.¹

ISGP

The ISGP was found out from Kerala, but it does not assure the author’s nativity of Kerala. Dr. T. Ganapatī Sastri adds the suffix Miśra to the name Īśānaśivagurudeva.² Miśra is taken to be a non-Keralite name and the nativity of the author is decided accordingly. Dr. T. Ganapatī Sastri supports the argument that the author of ISGP was a native of Kosala or Mithila.

The ISGP is divided into four pādas, namely Samanvayapāda, Mantrapāda, Kriyāpāda and Yogapāda. Samanvayapāda has 14 pātalas, Mantrapāda 38 pātalas, Kriyāpāda 64 pātalas and Yogapāda 3 pātalas. Totally there are 119 pātalas. Altogether it has 18,000 stanzas.

The general principles regarding the Tantric rites and rituals to be performed as part of building construction are dealt with in the Samanvayapāda of ISGP. The second quarter of the ISGP, as the name Mantrapāda indicates, is dedicated to deal with the mantras to be chanted on various occasions. The third quarter, as indicated by the name Yogapāda, deals with Yoga especially the Yoga of Patañjali. The fourth quarter which is the largest of the ISGP is completely devoted to deal with matters regarding construction.

The ISGP can be considered to be a mini encyclopedia. Protection of house, subjugation by enchantment, jugglery, Yoga, different kinds of treatments, ṇaṝa, ḍoma, the science of magic and the construction of buildings have been the topics. Temple architecture is a major subject in the ISGP. Selection of the site, laying of the foundation, structure of the temple, construction of the temple, sculpture of idols
and their types, installation of idols, consecration and the rituals related to all these have been dealt with in the ISGP.

Selection of site
The most important step in the construction of a temple is the selection of land. Land should be located in a very sacred place. The ISGP has made some important observations in the selection of land. The place should be surrounded by rivers and mountains and the land should be fertile. The land is divided into two types: sāmānya and saṅkīrṇa. The land, which is favoured by Vedic poets and Brahmans, where trees are densely grown, which is the source of good wealth, which faces waterfalls, which is surrounded by plants bearing fruits and flowers, where cows pasture freely and which has plenty of water are enlisted under sāmānya. Saṅkīrṇa type of land is not usually chosen by the people belonging to the four varṇas.

Rituals
Some important rituals are to be conducted as part of the temple construction. The patron who intends to construct a temple should approach a high priest who is to be worshipped by eight other priests at the behest of the patron. The eight priests are supposed to be the eight forms of Śiva. The patron should worship the high priest and request him to take charge of the ceremony along with others. The next ritual is warding off evil spirits. This is conducted by the high priest before the beginning of the plunge in a ceremony. The land is to be tilled by others and seeds are to be sown by uttering the names of Vāmadeva.

Temple precinct
The site is sprinkled with water and cowdung mixed together. The boundary is demarcated with an iron hammer and stumps are fixed. The area is then cleared of all its vegetation.
Vāstudevatā

Vāstudevatā is to be worshipped by performing vāstupūjā in the proposed site. There are a number of stories connected with the Vāstudevatā in the Indian mythology related to architecture. The ISGP also deals with such stories. The Vāstupuruṣa is supposed to be lying on the site stretching his legs to the north-east and placing his head towards the south-west. The ISGP quotes the story of Vāstupuruṣa from Somaśambhu to show the importance of vāstupūjā.

Laying the foundation

The first brick is to be placed in a pit which is to be dug to the depth of the height of a man with his hands raised. The bricks should be properly baked and should be unbroken. Each corner of the plot joins seven other columns by drawing lines. A number of points where the lines cross one another will emerge and these are called marmas. Pits are to be dug at marmas.

Temple structure

The design of temples that prevailed between the twelfth and fourteenth centuries has been dealt with in the ISGP. It presents a detailed account of the special features that flourished in the design and structures of temples.

It is not within the scope of the present paper to go into all the details of temple architecture dealt with in the ISGP. The concern here is to assess the application of the details of temple architecture dealt within the ISGP in the construction of Kerala temples.

The temple architecture tradition of Kerala comes within that of the mainstream of Indian tradition. In the detailed articulation of its formal structure Kerala temple follows its own indigenous methods, but the basic conceptions are not different from the total architectural developments of India.

Early sources like the Brāhatsamhitā classify temples based on norms of proportionate measure and they list twenty
possible shapes of prāśāda. The texts on architecture, classify temples into three different styles: the Nāgara or 'northern' style, the Drāviḍa or 'southern' style and the Vesara or hybrid style which is seen in the Deccan between the other two. The ISGP follows the prāśāda-vimāna classification of structures in general and the Nāgara-Drāviḍa-Vesara classification of vimāna. There are also distinct styles in peripheral areas such as Bengal, Kerala and the Himalayan valleys. But by far the most numerous buildings are in either the Nāgara or the Drāviḍa styles and the earliest surviving structural temples can be seen as falling into the broad classifications of either one or the other.

Construction of the structural temples which began in the eighth century AD was patronized by Chera, Áy and Mushaka kings. The ruler and the leading chiefs and landholders vied with one another in liberal endowments for the construction and maintenance of the temples. Apart from this, the inflow of wealth into the country arising from Kerala's prosperous overseas trade had brought into existence, an affluent mercantile community during this period. A vast majority of the ancient temples that we find in Kerala today had their origin during this period. Various types of temple structure, like square, circular and apsidal originated during this period. The presence of Sapta Mātrkā images datable to this period also proves the prevalence of rectangular shrines. Square vimānas antedate the other ones because all the cave temples conform to this type.

Temples in Kerala used to be called ambala or kṣetra or sometimes tali. The Kerala temple has Śrīkovil as its main core, which usually stands in east-west axis and the plan may be square, rectangular, circular, elliptical or apsidal ground plan. Compared to the other temple styles in the mainland like Drāviḍa, Nāgara and Vesara, Kerala temple tradition has distinct characteristics especially in their formal structure. The architectural style of Kerala temples has an inherent simplicity which becomes very conspicuous when
juxtaposed to the exuberance of the Nāgara, Vesara and Drāvida temple styles. In explaining this, influence of the natural environment upon the temple form has to be recognized along with the socio-historical developments.

The basic relationship of the particular landscape which contains and holds the respective architectural form is a major deciding factor. Between the two, an organic unity and balance exist, which keep on interacting with each other. The environmental space which envelopes the architecture has a major role in the articulation of architectural form. This interdependence or the reciprocal relationship between environment and architecture can be further noticed in the construction of superstructures in Kerala temples. The two monsoons a year, and the humidity in Kerala weather has a direct bearing on the use of sloping roofs and the selection of raw materials by which the superstructure is being constructed.

The superstructure as a conspicuous example shows an accurate usage of indigenous raw materials like timber and tiles to go with the climatic conditions. Vast majority of temples have their bases built of granite, the walls made either of wood, bricks and stucco, or laterite; the sloping superstructure made of wooden planks, tiles or sheet metal on timber frames, are adopted to suit the high rainfall of the region. The roof timbers rest directly on the wall and coverage in gable form to meet at the top. The roofing material covering the timber framework is clinker built. It is made up of wooden planks overlapping one another, and covered over by clinker tiles or tiles highly heated in kilns with a glazy smooth surface that makes them waterproof. The details given above substantiate that the raw materials used are meant to withstand the damp weather.

A truly indigenous contribution to the mainstream of Indian architectural tradition is the circular temples. The ponderous appeal of the sloping conical superstructure above the circular basement and walls is a clear testimony of
the local idiom. Further, the edge of the superstructure comes down to join in hugging the earth. The height of the superstructure is further softened by the circular mould bands which function to accent down the verticality and emphasize the horizontality. The symmetry of the circle does not hamper fine nuances and modulations of the wall below. The spread of the conical roof above the wide cylinder, formed by the circular wall gives to the structure at the same time, a buoyant lift and a light winged aeriality. As a matter of fact, conical roof is the most satisfactory logical solution for the enclosure built on a circular plan. In a few cases, the rhythm of the circular temples is further extended into elliptical shape.

Most of the temples, some with original adiśṭhāna, dating from eighth-ninth centuries have considerably renovated superstructures. So they do not reveal much of their original forms. The difficulty in exactly verifying the principles and specifications laid down by the ISGP in the structures of Kerala temples is mainly this. The author of the ISGP might have taken into account the structures of the Kerala temples of those days in writing the book. He has also incorporated in his work the teachings of a long line of Saiddhāntikas who were influential all over India during the ninth-eleventh centuries and later.4

The major parts of a typical Kerala temple

The parts of Kerala temples are calculated based on many schemes. According to one scheme the major parts are twenty in number. They are as follows:

1. Devapratīṣṭhā or Idol

Devapratīṣṭhā or idol of God or Goddess is the most important part of a Hindu temple. Idols made of granite, pañcāloha, or wood is usually installed inside the Garbhagrha or Śrīkovil. Idols are made according to the dhyānaślokas. Apart from the normal daily worship, rituals for propitiating
the deities, there are many Tantric rituals aiming at increasing the glory and power of the deities and sometimes for atonement for any fading of such power.

2. Śrīkovil or Sanctum Sanctorum

The part of the temple where the idol of God or Goddess is situated is referred to as the Śrīkovil. The position of Śrīkovil in the temple is equivalent to the position of Sahasrāra padma in a human body.

The Śrīkovil may be in square, rectangular, elliptical or circular shape and may have one two or even three stories covered with copper or gold. A Śrīkovil or garbhagṛha having two walls and a corridor in between these walls is of śāntara style. If the Śrīkovil has only one wall it is of nīranta style. The top of the sanctum has a pointed bronze or gold structure called Tazhikakkudam or stūpikā.

3. Sopāna

The holy steps in front of the sanctum sanctorum are called sopāna. In many temples the sopāna has stone idols of guards of God called dvārapālakas. Usually sopāna is covered with gold or bronze. Sabarimala Temple has gold covered sopāna and dvārapālakas. Only temple priests are allowed to enter through these holy steps.

4. Pradakṣiṇavaṭta or Akaṭhe balivattam

It is located just outside the sanctum. The Aṣṭa-Dik-pālakas (Indra, Agni, Yama, Nirṛti, Varuṇa, Vāyu, Soma and Iśāna), Sapta Mātrakā (Brahmāṇi, Māheśvari, Kaumāri, Vaiśnavi, Varāhi, Indrāni and Cāmuṇḍi), Virabhadra, Gaṇapati, Śāstā, Ananta, Durgā, Subrahmaṇya, Kubera, Nirmālyadhāri and Brahmrā. The guards of the main deity are represented here by stones of different shapes and are generally called Balikkallu. Usually these balikkallus are covered with bronze sheets. Pradakṣiṇavatta of Kazhakuttom Mahādeva Temple and Balikkallu representing Yama of Anandavallīśvaram
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Temple, Kollam are good examples.

5. Mātrśālā

Mātrśālā is located in the south side of Śrīkovil. It is an extended portion of Nalambalam towards Śrīkovil to cover the Saptamātrbalikkallu. Hence the name Mātrśālā. Usually the Utsavabali ritual is performed in the Mātrśālā.

6. Namaskāra-maṇḍapa

Namaskāra-maṇḍapa is located in front of the sopāna facing the sanctum. It is used by the priests for Sāstāṅga namaskāra after pūjās like Usha pūjā, Pauthiradi pūjā and Uccha pūjā. Hence is the name Namāśkāra-maṇḍapa. It is generally square in shape and has a roof hung by four pillars and usually has a Tazhikakkudam made of gold or copper. Usually Vedajāpa and Kalasapūjā are done at the Namaskāra-maṇḍapa and so it is also called Kalasa-maṇḍapa. In Śiva temples it is called Nandi-maṇḍapa because of the presence of Nandi and in Viṣṇu temples it is called Garuda-maṇḍapa because of the presence of Garuḍa.

7. Nalambalam and Valiambalam

Nalambalam is also called Chuttambalam. Their function is to protect the temple as they cover the temple on all sides. They are less broad on the surrounding three sides and are called Chuttambalam. The one facing the sanctum is very broad and is called Valiambalam. Between the two Valiambalams there is a passage for devotees to enter and exit.

8. Thidappally

Thidappally is the kitchen of a temple. Thidappally is constructed on the left side of the Namaskāra-maṇḍapa as an enclosure in the south eastern corner of the Nalambalam. Naivedyams to be offered to the deity are prepared in the Thidappally. None other than the priests and Tantrī of the
temple is allowed inside the Thidappally.

9. Mulayara

Mulayara is a special room of the Chuttambalam and is used for Mūlapūjā on special days like Utsavam, Sahasra-Kalasam and Aṣṭabandha Kalasam.

10. Well

A well is a must in a temple. Its position is at the north-east, of the Nalambalam. Its water has to be exclusively used for abhiṣeka or preparation of naivedya.

11. Vilakkumadam

Another distinctive feature of Kerala temples is the use of Vilakkumadam, or the multi-tiered brass lamps in front of temples. Lakṣadipa is a spectacular celebration of traditional lighting where tiers of small oil lamps lining the outer walls of the inner prākāra are lit. It is located outside the Nalambalam. In between the Nalambalam and Vilakkumadam there may be an open area. Only Mahā-kṣetras will have separate Vilakkumadam. In small temples multi-tiered brass lamps are fixed on the Nalambalam itself.

12. Balikkalpura

It faces the sanctum and is the extended portion of the passage in between the Valiyambalams. The large, Valiya Balikkallu (principal bali-piṭha) is located here. Size of the Valiya Balikkallu depends on the size and height of the Śrikoval. The roof of the Balikkalpura may have the wooden sculptures of Aṣṭadikpalākas and Devī. Valiyabalikkallu is also decorated with sculptures. But in temples like Kudal- manikyam there is no Balikkalpura for Valiya Balikkallu.

13. Dhvaja or Kodimaram

This tall pillar is visible from a distance. It bears on the top the deity's vāhana as emblem and one can identify the
deity of a temple by seeing it. Śiva temple has Nandi, Viṣṇu temple has Garuḍa, Durgā temple has Lion, Kāli temple has Vetāla. Śāstā temple has Horse, Subrahmanya temple has Peacock, Gaṇapati temple has Mūṣika and Sarasvatī temple has Hamsa on top of the dhvaja. Aṣṭadikpālaka idols are placed at the bottom of the dhvaja. Kodimaram is used for hoisting kodi or flag during festivals. It is located outside the Balikkalpura and is usually made of wood and covered with copper, pañcaloha, silver, bronze or gold.

14. Anakkottil
Anakkottil facing Balikkalpura is located in front of the dhvaja. It is the place where elephants stand during festivals. It is also used for functions like marriage, chorunu, parayeduppu, thulabharam and bhajans.

15. Shivelippura and Pradakṣiṇa Vazhi:
Shivelippura or Shribalippura is not so common in Kerala temples. This is the place used for Kazhcha Śrībali. Padmanābha Swami Temple of Thiruvananthapuram and Guruvayoor Temple have beautiful Shivelippuras. In other temples instead of Shivelippura there will be a Pradakṣiṇa Vazhi in the Thirimuttam.

16. Uṭṭupura
Uṭṭupura is the dining hall of a temple. In the past only Brahmmins were allowed to take food from Uṭṭupura. Nowadays, they are used for Annadānam and Varāsādyam meant for all. It will have a large kitchen. In some temples like Vaikom and Ambalappuzha the Uṭṭupura is as sacred as the temple Śrīkōvil.

17. Kutthambalam
The Kutthambalam or the theatre hall of the Kerala temple is located on the south-east corner of Nalambalam. This is the place where the performance of Chakyarkuthu and Kudiyattam art forms, are held. Kutthambalams are
usually in rectangular shape and has three parts. \textit{Raṅgapītha} or stage raised from the rest of the floor, Nepathyam or green room and a Prekṣakagraham for viewers. Kutthambalams are often decorated with large number of wood sculptures. Thus the Kutthambalam plays a role in educating visitors on the rich legends of the Indian cultural fabric. Kutthambalams in temples like Thriśivaperoor, Thirunakkara, Thiruvvarppu, Harippad, Kidangoor, Arpookkara and Irimjalakkuda are famous for their sculptures. In some temples like Tripunithura Śrī Purnathrayisa temple, Kutthambalam is a part of Nalambalam.

18. \textit{Gopūram}

Major temples will have four \textit{Gopūrams} in east, west, south and north. Śrī Padmanabha Svami Temple of Thiruvananthapuram is the only temple in Kerala having a huge \textit{Gopūram} with stone works. The four \textit{Gopūrams} of Aranmula Parthasarathy Temple and Thrissur Śrī Vadakkumnatha Temple are examples of typical Kerala style. The four \textit{Gopūrams} are connected to the outer compound wall of the temple. There is the typical Kerala style of architecture of temple towers and it varies from single to multistoried.

19. \textit{Mathil} or \textit{Outer walls}

These are the outermost protective coverings of the temple. Major temples are well protected with huge compound walls.

20. \textit{Thirthakkulam}

Nearly every temple has a sacred pond or Thirthakkulam and kulappura outside the temple wall if there is no river nearby. Normally, the temple pond is located on the north-east corner of the temple. The water of the temple pond is used for washing one’s hands and feet before going into
the temple, bathing and sometimes for the Arattu ceremonies.

A temple having all these elements is called a *Mahākṣetra* (great temple) or Perumthirkkovil. There are a number of Mahākṣetras in Kerala.

*Paṇca-prākāra scheme*

The details given above are sometimes reduced to a *Paṇca-Prākāra* scheme. As the term indicates, the five enclosures around the sanctum are as follows:

1. Akatthe-Balivattam—The innermost enclosure, which includes the Śrīkovil, Antar-mandala, Bali-Kallu and Namaskāra-manḍapa.
2. Nalambalam/Chuttambalam—Around the sanctum consists of Valiambalam, Thitappalli and Mulayara.
3. Madhyahara/Vilakkumatam—The ‘Galaxy of Lamps’.
5. Maryādā/Puram Mathil—The outer boundary wall with Gopura, Uttu-pura and Puram-mathil.

The Kerala temple walls are made of coursed laterite stone masonry plastered in mud and lime. Murals are seen on several of these temple walls.

The Kerala temple is an amalgam of stonework, wood work, stucco work and painting, harmoniously blended into a structure. The wood work here is of great importance, and it gives the essential character to the Kerala temple. The inner skeletal framework of the temple is of wood, and the base and the structure above are of granite and laterite respectively. The roof projects out at several levels, in order
to protect the inner skeletal framework. This is in view of the protection from the vigorous monsoons prevalent in the region.

The Drāvida type of temple construction described in the ISGP fits in Kerala temples. Of course there have been several improvements made by the architects. Actually theory and practice are inseparable. Theory is improved by practice. This applies to temple architecture also.

There is an argument that the temple culture of Kerala is based on Vedic moorings, in contrast to the Agamic traditions of Tamil Nadu. It is a fact that Kerala temples of the present day exhibits presence of Vedic influence. But this would not have been the case ever since the origin of temple culture. In fact the Vedic and temple traditions are entirely different. The former is that of sacrifices whereas the latter has nothing to do with sacrifices. It was only much later that the Vedic Brahmins crept into the temple tradition.

The ISGP represents a period when Brahmanism had already occupied key positions in the temple tradition. It may be noted in this connection that the ISGP deals with the details of temple construction in strict accordance with Cāturvarṇya.

The structure of Kerala temples represents vimānas and prāsādas. Vimānas imply different specifications with regard to each and every measurement of the building. Prāsāda mainly implies the pleasure obtained by residing in the building. Prāsādas generally denote Nāgara type and Vimānas Drāvida type of temples. Vimānas are of two kinds namely Jātivimānas and Jātitaravimānas. Jātivimānas are meant for the Brahmans, Kṣatriyas, Vaiśyas and Śūdras. Twelve types of Vimānas are designed for Brahmans, twenty-four for Kṣatriyas, eight for Vaiśyas and eight again for Śūdras. The ISGP deals with all these details. Thus a total of fifty-two structures have been enumerated in the ISGP.

The ISGP mentions about Mukhya type of Vimānas also.
All the three kinds namely Jāti, Jātītara and Mukhya are designed in the same pattern as that of Nāgara, Drāviḍa and Vesara. The structures which come under the category of Mukhya are designed as the abodes of the trinity namely Brahmā, Viṣṇu and Śiva.

Descriptions of, different parts of temple from the basement to the sanctum sanctorum, pedestal of idol, pillars, Prastāra, Dwāra, Gopūra, Śikhara, Storeys. Sopānas, structures like Nalinakam, Svasthikam, Chaturmukham, sanctum sanctorum, drains, manḍapas, walls, rites and rituals etc. available in the ISGP concur with the structure of Kerala temples. Based on this, it can be ascertained that Īsānaśivaguru was a native of Kerala.

REFERENCES

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DRAVIDIAN TEMPLE ARCHITECTURE: ŚRĪ PADMANĀBHĀ SWAMY TEMPLE - A CASE STUDY

VYSAKH. A.S.

The fame and glory of the ancient city of Thiruvananthapuram, the capital of the state of Kerala attributes to the majestic Śrī Padmanābhā Swamy Temple centuries before and even to the present. Encompassed by numerous tales and legends, the antiquity of its origin is still shrouded in mystery. The Padmanābhā Swamy reigns as the tutelary deity of the Travancore royal family and forms the heart beat of the people of Thiruvananthapuram. Two distinct aspects were associated with this temple. From the time it is known, it enjoyed the stature of a Mahākṣetram (Great temple) and it was all along interconnected with royalty. The temple is identified as one among the 108 Tirupatties or great temples of Viṣṇu, one among the seven Muktisthalas or spiritual seats of salvation and as one among the six Nārāyanasthalas or centres of Vaishnavite divinity in India. The earliest known records of this temple appear in the Epics and Purāṇas and the first reference to its sanctity is seen in the Syanandoora-Purāṇa-Samuchayam of AD 1168, followed by literary and epigraphical sources.

The concept of ‘Śrī Padmanābha’ is one among the twenty-four visualizations of Śrī Mahāviṣṇu. Here the great Perumal (lord) is worshipped as the ever blissful one who is the very embodiment of peace as also the one reclining on the mighty
Ananta (serpent) in conscious slumber. Since the Padma or Lotus spirals up from his nābhi or navel, he bears the name ‘Padmanābha’.

The temple owes its present magnanimity to the devotion of numerous ruling families that had ruled the Malayala Nadu (Kerala) in the bygone era. Despite the changes in the names of the ruling houses, the Padmanābha Swamy Temple had received continued emotional allegiance and royal patronage. To quote Gouri Lekshmi Bayi in Śrī Padmanābha Swamy Temple, “As the dynastic deity as well as personal deity of the royal lines who held sovereignty over this land, the temple and the throne were interlinked by bonds which stood the test of time. The Temple coloured all activities of the State and their interests overlapped and became one.”

The deity became the temporal as well as the spiritual Head, the monarch of the State of Travancore with the famed ‘Trippadi Daanam’ the deed and dedication of the whole territory by the Maharaja Anizham Tirunal Marthanda Varma, the founder of modern Travancore on January 20, 1750. All honours thus reserved for the sovereign were transferred to Śrī Padmanābha Swamy and the kings of Travancore thenceforth ruled only as the servants of the Lord. Surprisingly even the British Government recognized the deity as the real ruler. And it is therefore unique in the world history of religion that a deity be recognized as the constitutional head of the state and government even by the foreign powers whose overlordship existed at that time. History stands as an exception here, that no invader had ever dared to gaze at this abode of the Lord of wealth and remained free from any ravages of plundering wars or external invasions, thus adding to its supreme power and treasure since its inception. Apart from its unending historical connections and royal patronages, the temple is a treasure house of art and architecture as well. Too much space will be required if a detailed description of its architectural and artistic treasures is embarked upon, consequently only a brief
introduction to this structural extravaganza is envisaged here. The temple received its present form after the major renovation carried out under Marthanda Varma.

Architecturally the Dravidian style is predominant as such, but the overall structural pattern locates an intermingling of Kerala-Tamil (Dravidian) styles of vāstu and patterns are evident. Though this is the case, the Nayik influence with distinct local flavour could also be traced. To the whole, Śrī Padmanābha Swamy Temple is an amalgamation of the Dravidian, Chola, Pandya and the Kerala styles of architecture which complement and not contradict each other. The treatises used for the construction of the temple include the Śilparatna, Syanandoora-purāṇa-Samuchayam, Isāṇśivagurudevapaddhāti, etc. along with incorporations from Dravidian and other indigenous texts. As this remains the fact, this article concentrates on the Dravidian aspects of the temple along with the various amalgamations.

It is the Rajagopūrām (tower) abounding with figures and decorations that characterises the Padmanābha Swamy Temple. The Tamil style was a deliberate incorporation, and was unavoidable as the southern regions of Tamil Nadu were often under the rule of Travancore. The close cultural affinity was thus recognized and cemented it with the emotional fusion of the two major linguistic groups,—the Malayalees and the Tamils.

The present form and structures we see today in the Padmanābha Swamy Temple took shape during the reign of Anizham Tirunal Marthanda Varma (1729-58), the architect of modern Travancore, who renovated the temple. The king took pains to keep the ancient character and the originality of the same, thereby preserving it as an everlasting monument of his undeterred devotion to the deity. Earlier in AD 1686, during the reign of King Iravi Varma, a great fire engulfed most of the temple complex which was originally made of wood. And hence during its
renovation a great deed of conservation was shown by Marthanda Varma by deciding the extensive use of granite. The responsibility of the work was entrusted to Viṣṇu Thrata Namboodiri of Thyaud Illom and Anantha Padmanabh Anarasi being the chief mason, while the Maharaja took upon himself the task of supervision at every stage.

Hereafter, it would be pleasing to enter into the architectural wonder of the temple covering upon a circumambulaton in the vast canvas of vision.

*Poetry in Stone–Architecture and Structure*

The Padmanabh Swamy Temple rests at a moderate elevation on about seven acres of land enclosed within high granite walls on its four sides overlooking the Agasthya mountains on the east. The granite boundary walls contain isolated engravings here and there including the ones of Mārkanda, Śasta, floral and animal design, etc., thereby turning itself into a huge canvas. On either side of the path leading to the temple, is seen the famed sacred pond 'Padmatirtham' on the right and a row of the palatial buildings uniquely in Kerala style on the left.

A flight of thirteen steps (it is believed that originally they were eighteen and five of them got buried in the sand) lead to the main entrance of the temple. The steps lead to the portico, the roof of which being supported by two elegantly carved mighty figure of Vyali (dragon) on either side depicting an essential feature of Kerala architecture. One enters into the lofty and spacious hall called the 'Natakasala Mukhappu'. It is the area embarked for conducting drama, dance, musical recitals, scholarly discourses, etc., the holding of such temple arts being an exquisite feature in Kerala temples. The hall being 120 feet long and 48 feet wide with two raised platforms on either side for the spectators. A specially constructed carved wooden room on the left raised platform is reserved for the royal
ladies to watch the performances. Moderately carved four rows of ten fluted pillars in the hall supports the roof.

The self imposing, 'Gopūram' has its own uniqueness, standing separate from any other temple in Kerala. The structure, dimension and symbolism that it emanates is unparalleled. As delineated earlier the 'Gopūram' was constructed as an unifying aspect of the two related cultures—the Tamil and Malayalee. Hence this very structure could be seen only in the two temples under the erstwhile Travancore, they being the Suchindram Temple in Tamil Nadu and one at the Padmanābha Swamy Temple. The foundation stone for the imposing Gopūram was laid in the time of King Aditya Varma in AD 1565 and goes about forty feet deep. The first five stories of the present Gopūram was constructed at the time of Mārtanda Varmā during its major renovation in 1929 and the last two by Maharaja Karthika Tirunal Rāma Varma. The Gopūram is made up of brick, lime and mortar on granite base rising to about one hundred feet with steps leading right up to the floor. Seven globe like structures called the 'Thazhiakkudams' are placed on the boat shaped ornamentation right on the top of the Gopūrā. The boat shaped structure peculiar with its structure, stands unique and is an uncommon feature in Gopūrāms. This ornamentation is symbolical, depicting Vanchi Nadu which is another appellation for this state, the Vanchi or boat itself being displayed. The association with Kola Swaroopam and another indicative of prosperity are implied with this typical structure. Each floor carries a window—like opening (niche) in the centre guarded by two Dvārapālakas. The Gopūram itself is incorporated with more than two hundred odd figures and figurines each different from the other. The first floor contains numerous carvings of deities including the depiction of Ananta-sayanam. A panoramic and enchanting view of the city spreads like a feast before the eyes from the top floor of the Gopūram, also visible is the distant view of the Agastya ranges in the east and the lined
depiction of the Arabian sea in the west.

On ascending the Gopūram, protruding columns have been worked out in the central area indicative of the later Chola style constructions. The base of the same displays themes from Hindu Purāṇas including the Mahābhārata and Rāmāyaṇa presented with a wealth of expert craftsmanship and creativity. Two huge Dvārapālakas depicted in great detail are seen on the platform on either side of the floor level of Gopūram. A pair of single stone, one vertical and the other horizontal make up the main door frame, with four elephant heads with raised trunks pretend to support the weight of the Gopūram on their backs. The entrance corridor too has depictions of artistic reliefs and exclusively depicted works from the Purāṇas.

A small corridor connects the Seevelippura (path for circumambulation) with six pillars. On these pillars are carved the figure of the chief sthapati or mason Anantha Padmanābhan Moothasari and his family as well as the replicas of the tools used, right in front of the Dhvajastambha (flagstaff) and entrance to the sanctum sanctorum. The Seevelippura being one of the masterpieces in this temple is of impressive dimensions completed in an unbelievably short duration of six months due to the ceaseless effort of ten thousand artisans, four thousand chief masons along with a hundred elephants. It is a rectangular corridor fully open at the sides and covered on top with huge granite slabs running all along the four directions.

Three hundred and sixty-five (two other versions too exist) majestic pillars and one fourth in memory of the master craftsman support the entire structure. Each pillar has a Dipalakṣmi (female figure carrying a lamp in her cupped hands) facing the Seevelippura. The other three sides are engraved with figures of Gods, men, animals, floral designs, etc., surprisingly the ornamentation of no two pillars are identical, each is entirely different from the other. On the ceiling of the Seevelippura are often chiseled the fish, mainly
the Makara Matsyam, auspicious one in the Vaishnavite faith, the sacred council (Saṅkha), wheel (Cakra), and so on. The massive structure running the entire outer area of the shrine is a continuous corridor primarily used for the Śrībali (ceremonial circumambulation of the deities) procession. It could accommodate two thousand people at a time and collective prayers and mass food distribution etc. were conducted along the corridor.

On proceeding southwards from the spot of the flagstaff, immediately on the western inner area rests the famed Kulaśekhara Maṇḍapa moving along the eastern corridor on the left, touching the boundary wall is a covered pillared structure, an area earmarked for the officials and families to watch the processions. Further on is a comparatively narrow corridor to the left, going eastwards with pillars representing the Daśāvatāras, at the end of this is a private entrance used by the Mahārāja and members of the royal family and is known as ‘Chempakathumoodu Naṭa’.

Each of the four corners of the temple has a Maṇḍapa popularly known as the Unjal Maṇḍapam, with an elevated platform carved with figurines. These are used for special events and also act as platforms for presenting temple arts, discourses and discussions. The first Unjal Maṇḍapam is situated in the south-eastern corner. Near it touching the southern wall are situated to tiled buildings, one containing the personal pūjā deities of the then Maharaja Śri Chithira Tirunal enclosed in an wooden temple replica. The other part is the Homappura to conduct the Mahāganapati homa. Adjacent to this are two granite pillars for the Tulābhāram or weighing a person against the commodity specified to the deity, the expensive Tulāpuruṣa Dānam were in the kings were weighed against gold coins, that was an inevitable ritual to be performed before assuming the title of ‘Kulashekara Perumal’.

The Bhadradeeppappura or Deepayaga Maṇḍapam is situated on the western side of these pillars and is enclosed
within another wall. The ancient structure is fashioned in Kerala architectural style that houses a śālagrāma of great potency. The temple well comes next, on the opposite side of which is the big kitchen or Vāliya Madapalli for large scale cooking and houses the offices of the Chief Officer/Śrīkaryakkar and Deputy Officer, responsible for the daily administration of the temple.

On the central right of the corridor is situated the centuries old Śrī Dharma Sastha Shrine at the Kanni Moola (south-west corner). The shrine being circular in shape tapers towards the top carrying numerous celestial figures and figurines sculptured beautifully. The outer wall is covered with wooden frames carrying lamp holders. Interior walls of the shrine possess traces of once elegant murals.

Taking the western path after the second Unjal Maṇḍapam on the central portion of the corridor facing the western entrance is a sacred place in itself. (It is here the second Dīpārādhana is conducted during the famed Alpasi and Painkunni festivals of the temple are conducted and the vāhana (vehicle) of Śrī Kṛṣṇa joins the procession at this juncture. Apart from this it is believed that the Syamantaka gem of the Śrī Kṛṣṇa fame is buried here. The western entrance is double-storied unlike the north and the south, and houses the Granthappura or the record room of the numerous manuscripts/churunās (or palm leaf scrolls, the temple contains about three lakh manuscripts, the largest collection in Asia) related to the day today practices and administration of the temple.

Passing on to the corner of the western corridor where it meets the northern is located another small entrance, specially used for the royal ladies to enter and has a room inside with a wooden fretwork frontage reserved for them to watch the processions and rituals. The entrance is named Śrīpadam Naṭa.

Moving ahead along the northern corridor, passing on the right is the Tiru Ampati Śrī Kṛṣṇa Temple. The Śrī Kṛṣṇa shrine is the oldest structure in the temple complex and
possesses an unique position of its own. The complex has its own Dhvajastambha and Belikkal (sacrificial stone) marking its extraordinary position. The magnificent carved wooden Namaskāra-mandapam or front covered platform, is self-imposing with its entrancing work and catch hold of any vision.

On the either sides of entrance to the Śrī Kṛṣṇa Temple are two Dvārapālakas. Entering the temple directly in the front is the stone idol of Śrī Kṛṣṇa portrayed as Pārthasārathi. A sopānam leading down on the centre of which is located a small Belikkal. The exterior walls of the inner shrine are adorned with rich collections of murals at the zenith of its beauty, depicting the instances from Kṛṣṇa's life. The either portions of the sanctum sanctorum is a large space, once believed to have housed a cow-shed/Goṣālā. The shrine therefore also known as the Goṣālā Śrī Kṛṣṇa Temple (the Kṛṣṇa of the cow shed). The walls also possess ancient inscriptions related to the temple.

On the northern side of this corridor range a long line of buildings serving different purposes. Just right of this is the two-roomed small shrine dedicated to Kṣetrapāla and Gañapati nearby. The shrine also possesses murals and carving on its roof. Moving ahead of this to the left, the lofty kitchen and halls utilized for the purpose of massive free food distribution are located. At the north-eastern corner a covered veranda leads to the shrine of Agraśālā Gañapati. The first portion of the structure contains a massive wooden box-like room or Ara, in which paddy were stored for temple purposes. In the interior of the second portion is located a not so old consecration of Gañapati. Outside of this shrine is located a granite well from which water was taken for temple purposes.

Adjacent to it is located the fourth Unjal Mandapam. At the centre of the eastern corridor we reach the initial position where the journey around the temple commenced. On the right is located the Dhvajastambha, the hall of
sculptures, the Belikkal area and the main entrance to the inner temple complex or the nalambalam.

Moving ahead of the Golden flagstaff is located the area called the ‘hall of sculptures’ at the centre of which, the Valia Belikkal is located. This is a double hall abounded with pillars offering endless fascination. By and large the sculptures follow the patterns laid down in the Śilparatnam, Syanandura-Purāṇa-samuchayam, Isanaśivagurudevapaddhati being the authoritative works. The centre of this hall is consecrated the main Belikkal in granite and gold plated. On the ceiling of it is pictured an aesthetically carved lotus from which is suspended a chain made of stone, probably a bell was hung earlier. The pillars around these marvelous pieces on which adorns numerous life throbbing sculptures of deities. Sculptures of Dakṣa, Śrī Rāma, Lakṣmaṇa, Sitā, dancing Śiva, Bhikṣātana Śiva, Rati and Kāmadeva, Úrdhva Tāṇḍavam, Gajendra Mokṣam, Dvārapālakas, etc. The two pillars having life size statues of Hanumān and Aṣṭāṅga Garuḍa are remarkably wondrous. Between the ceiling of these two pillars is carved a complete Meru Cakram, with the figure of goddess Lakṣmī on either side of it. The huge main entrance door finely carved in wood, executed in Vijayanagara style lead to the interior area leading to the main shrine called the Nalambalam. Through this doorway is visible the sanctum sanctorum directly. There are three doorways in the inner enclosure. Stepping into the broad passage way known as the Edanazhi which is flanked by two large raised platforms known as Vathil Madoms; where the Brahmins sit and chant Vedas and other texts. The platforms on either sides are pillared and ceilings are decorated with carvings of Bhīṣma, Śiva, Garuḍa, Anantaśayana, Hanumān, Rāma, Gaṇapati, Venugopāla, Bali-Sugrīva, the Pāṇḍavas and dancing ladies, etc. Just before the Abhisravaṇa Māṇḍapa, a square platform comes right in front and aligns itself with the central door of the main sanctum. The Māṇḍapa is pillared in each corners possessing a Dipalākṣmī.
'The Abhisravana *Mandapa* is approached by three steps each on its front and either sides. The *Mandapa* possesses twelve pillars. Five of them exhibit exceptionally sculptured figures of the five Paṇḍava brothers. The *Mandapa* is two storied or *dvitala*. While the three sides are open, the western side is partitioned off by wooden screens, yet one could get a glimpse of the inner shrine through the small window/door at its centre. Recanting a little, on the left of the Abhisravana *Mandapa* is situated the smaller kitchen where the *naivedyas* (food offerings) for the deities are prepared. And it is here that the inner southern gate is located.

Just right of this is situated the shrine of the second main deity, Śrī Narasimha Swamy. The *sopānam* (flight of Steps) leads to the two-roomed shrine of this fierceful deity possessing extraordinary powers. The consecration of Narasimha Swamy is of *Ugra-mūrti*, and is made of *pañcaloha*. The exterior of the shrine is filled with mural paintings.

Adjacent to the Narasimha Swamy shrine on its left another enclosure stands with three doors, two massive doors facing the south and the north including the small double door facing the *Mandapa*. This is the *Cheruchuttu* which is the immediate surrounding area of the sanctum sanctorum. Entering the inner area, on its middle is the famed platform of one single granite called the Ottakkal *Mandapa* or the Ekśilā *Mandapa*, built during the time of Marthanda Varma in AD 1731. The *Mandapa* is of a single massive granite quarried from Tirumala in the outskirts of the city and carried all the way through with the effort of numerous workers. It measures about 18x18 feet and 12 feet thick. Fourteen finely carved pillars covered in gold adorn the *Mandapa*. The ceiling of which is elegant with imposing carvings of *Aṣṭadikpālakas* in nine panels, with Brahmā at the centre.

This is another unique feature of this temple that, compared to other Kerala type temples the *sopāna* or the
flight of steps from the small front platform immediately outside the sanctum is absent and is replaced with the Ottakkal *Mandapa* as a continuation to the sanctum.

Three sets of doors open to it from the sanctum. Two *Dvārapālakas* of massive size are carved guarding either sides of the middle doors. The three doors are finely carved, plated with brass, copper and zinc alloy, and decorated with figurines of the Varāha, Kṛṣṇa, Hanumān, etc. on the first, Gaṇapati, Śiva, Viṣṇu, Lakṣmī, Garuḍa on the second and Anantaśāyi, Gaṇapati, Kāliyamardana, Śiva-Pārvati, etc. along with floral designs on the third door.

Beyond these doors are the *Garbhagṛha* or Śrīkovil. This rectangular sanctum sanctorum measures twenty-four feet long, eighteen feet wide and forty feet high. Consisting of two portions, of which the first is a long corridor type area and the second slightly elevated being the chamber where the main deity, Śrī Padmanābha Swamy is consecrated. The idol of the Lord in itself an iconographical marvel, is made up of a peculiar composition known as the *Katu-Sarkara-yogam* with 12008 sacred *Śālāgrāmas* (sacred stone of great potency) brought from the Gandaki river in Nepal. The *Mūla vigrāha* is eighteen feet long. The Lord is represented as in *Yoganidrā* with eyes partially shut reclining on the serpent Ananta. Brahmā seated on the lotus arising from the navel (*nābhi*) of the Lord. The raised left hand holds the lotus and below the right hand is a Śivalinga. The two sages Mārkandeya and Bhṛgu as well as the consorts of the Lord, Lakṣmī and Bhūmi devis in sitting posture including other sages are seen in the *Garbhagṛha*. The *Abhiṣeka* idol in gold and the *Seeveli* idol in silver used for outer processions are also placed inside the sanctum.

The *Garbhagṛha* is two storied or *dvitāla* structure with murals adorning the interior and exterior walls. The roof or *vimāna* of Dravidian style is tiled with copper sheets and has three gold *stūpikās* upon it. On the second level of the double storied construction of the sanctum in the mid
portion of each side, on blocks of wood stand four figures of the Kostha Devatás of the four directions. They include Viṣṇu (East), Brahmā (North), Narasimha (West) and Dakṣināmūrti/Śiva (South). The first two represent the Sattva guṇa, and the last two are indicative of the Rajo and Tamo guṇas. Apart from these numerous other celestials and episodes from the epics and the Purāṇas are abundantly worked.

Alighting from the single stone platform, on the left is situated the shrine of Viśvaksena (Lord Viṣṇu himself). It is another salient feature of this particular temple that, compared to any other temples in Kerala, the peculiar position reserved for Mahāgaṇapati is replaced and is attributed to Viṣavaksena. This is a typical feature among the unusual structural or procedural changes practiced, in contrast to other temples in Kerala.

Retracting back, the northern area is reached, wherein on the right (eastern side of Cheruchuttu) is located the Rāma Swamy shrine. The northern gate/door is also known as Svargavathil or the gate to Heaven, having its own ritualistic importance.

As one emerges out of the Cheruchuttu through the southern entrance near the Narasimha Swamy shrine, to the left of the western inner corridor is the area called the ‘Mahābhāratakonu’ having its own peculiarity. The largest temple mural in Kerala of the Anantaśayi Viṣṇu adorn the walls of this area. Moving forward on the southern side of the inner corridor, approached by few steps is the shrine dedicated to Veda Vyāsa and Aśvathāman. Soon after this area on the right is seen a gold-plated window like representation on the exterior of the sanctum wall on the south, where the sacred feet point of the Lord is located. Proceeding further near to the Svargavathil Natavar area, a small square platform on right called the Kariva Mandapa or Thiruvolakka Mandapa is located. Immediately beyond this is the Alaṅkāra Mandapa on left having finely carved motifs filling eight round pillars and twelve square pillars depicting
the ten incarnations of Lord Viṣṇu. Adding to one's curiosity, sixty-four arts of ancient India have also been illustrated on the bigger pillars. On its ceiling are depicted the Aṣṭadīlpālakas starting with Lord Śiva in the north-eastern corner.

Moving along this, on the right is the Abhiśravana Mandapa and thus is reached the eastern corridor of the Nalambalam, from where the circumambulation of the inner area was set off. All around the exterior portion of the Nalambalam, wooden frames fixed on planks comprising of lamp holders are erected called the Dipaśālā or Vilkkumadom, where once the entire lamps are lit provides a cosmic trance to the devotees. This structure is an attribute of Kerala temple architecture.

The structural marvel would not be complete without the details of the Kulaśekara Mandapa.

The Kulaśekara Mandapa is an extraordinary creation, the one being like a poetry in stone. It expresses the zenith of creativity. The Mandapa was constructed at the order of Maharaja Karthika Tirunal Rāma Varma and completed in 1958 to perform the elaborate ritual of 'Hiranyagarbha' for the Maharaja who would gain the prestigious title of 'Kulaśekara Perumal'. The style of figures are predominantly Tamil, yet typical Kerala like features are also incorporated. This rectangular structure is enclosed within a framework of wooden railings. The outer boundary of which is thirty-six finely chiseled Dipalakṣmi figures. The main platform is slightly elevated from the outer one and is separated by a small corridor between them. The bottom of the platform appears like an upturned lotus and is highly carved. Depicted on the granite ceiling are episodes from the Rāmāvana. The main platform contains twenty eight pillars, embellished with vast variety of figures. Out of these twenty-eight, four ornamented pillars on the four corners of the Mandapa are unique and are the musical pillars. Each group possesses nine pillars producing as many musical resonances
and sounds of percussion instruments. This is one among the eleven such temples in India possessing such creative excellence.

Each pillar has a central figure of a deity and surrounded by numerous other deities and celestial beings along with elaborate designs. To delineate each one here demands more space and is perilous; henceforth some of the depictions are mentioned. The sculptures decorating the pillars includes that of Śiva-Sakti Pañcākṣari, Dhyāna Mahā-Viṣṇu, Svayamvara Śiva with Viṣṇu, Brahmā and Hanumān, Mahāgāyatrī, Mahālakṣmī Gopāla, Ananthaśayimūrti-Viṣṇu seated on Ananta frankled by Grauḍa and Hanumān, Svayamvara Rukmini, Veṇugopāla, Viṣṇu, Lord anointing himself with Aṃrtābhiṣeka (nectar), Vīra Rāma, Caturbāhu Gaṇapati, Brahmaṇḍa-tanḍavamūrti, Svayamvara Śrī Kṛṣṇa, Śrī Rāma Paṭṭābhiṣeka, Gajendramokṣa, Svayamvara Padmāvti, Bhadrakāli, Śrī Śaṅkaranārāyana, etc. These elegant pieces are themselves works of art with their seductive stance and exquisite features. This Maṇḍapa is a source of eternal delight radiating life, providing divine ānanda (bliss) to the devotees and the lovers of art. The magnificence of this unique structure itself is an unparalleled attribute to the Śrī Padmanābha Swamy Temple.

This marks the complete pradaksīna (circumambulation) of the mighty temple, peeping into the architectural marvel and divine manifestation. The architectural splendor here is symbolic with the attribute of Lord Viṣṇu as ‘Alankārapriya’ or one fond of ornamentation and hence the abode of the one ‘Supreme’ is expressive with artistic excellence and craftsmanship, in addition to its several salient features that Śrī Padmanābha Swamy Temple alone possesses.

The potential and divinity of the Śrī Padmanābha Swamy Temple is renowned world over since its inception. With the recent revelations of the invaluable treasure, the temple
has gained world-wide fame. Though the value of these ancient riches are yet to be determined, the glory of the temple has crossed borders and captured lasting position in the minds of the people around the world. Substantially, the temple presents a unique architectural grandeur establishing itself in the pedestal of the South Indian Temple Architecture. It is therefore stressed, the essentiality of assimilating and appreciating this paramount creative aspect of temple architecture that has surpassed the vigorous tests of time, radiating perpetual celestial bliss.

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IMPORTANCE OF THE TECHNIQUES OF VĀSTU LAKṢĀṆA IN THE MODERN HOUSE CONSTRUCTION: AN ANALYSIS

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Constructing a house is the dream of every person. Usually people construct houses according to their needs and subject to their financial capacity. But many people are not bothered about the importance of land and environment in construction of a dwelling house. It is true that due to the rapid urbanisation and modernisation it seems difficult to consider all the environmental and land factors. The non-availability of authoritative books which explains the selection of environment and land for constructing a house is also another big problem.

This paper is prepared in accordance with the book the ‘Vāstulakṣāṇam’ written by Shri Ramanunni Shastri, which is preserved in the Manuscripts Library, University of Kerala. This paper describes the importance of modern architecture. This paper also attempts to answer how to construct houses which can overcome any type of climate change and other hazards. This book describes suitable and unsuitable land for living. It also includes selection of land on the basis of Cāturvārṇya. Other than these it inculcates land division and path division. It gives detailed description on installation of idols of gods, utilisation of each rooms, and the methods of establishment of Thazhikakkudam and construction of ceiling and wooden frames for door.

This book describes first the nature of land which is
suitable for house construction. The land which is low in east side and high in western side should be selected. This land should be filled with human beings and cows. The land should be suitable for all types of trees. The land should have brook and river which flows on the right side of the house. In such a place river should carry water even in summer season. Here climatic condition should be stable even in winter and monsoon seasons. Such a land is suitable for construction of houses.

This book describes the land which is not suitable for house construction. The land having corners two, three, five, six as well as having corners like crescent shaped is not suitable for house construction. The land having ashes, skeleton, hair, graveyard, snake, worms, rat, pig, fox, bad odour, etc. is also not suitable.

In Cāturvāṃya society has been divided into four, such as Brahmins, Kṣatriyas, Vaiśyas and Śūdras. According to this division the land for house construction has also been fixed. The land having a square shape, white-coloured, ghee smelled, tasty was allotted to the Brahmins. The land having one eighth length, red colour, blood smelled, bitter tasted was allotted to Kṣatriyas. The land having one-sixth length, with bushes, yellow coloured, food smelled was allotted to the Vaiśyas. The land having one-fourth in length, black coloured, liquor smelled was allotted to the Śūdras.

For identifying the suitable land in accordance with the cāturvāṃya system, first step was to dig a pit on the land. A lamp is lighted with a prayer to Brahmā. Then the direction of the flame will be identified. If it is in the eastern direction, it should be allotted to the Brahmins, if it is west, it is to the Vaiśyas, if it was north, it is to Śūdra, if it is to south, it is to Kṣatriyas.

When the land is selected, it is divided into four parts. 1. Īśāna koṇa (north-east). 2. Agni koṇa (south-east). 3. Nirṛti koṇa (south-west). 4. Vāyu koṇa (north-west). Among these, Īśāna koṇa is prescribed for the house construction.
Then this book describes the methods of dividing land into nine vīthiś to find out which are suitable for human life and which are not. The path which is suitable for living are called as Deva vīthi, Vaiśravaṇa vīthi, Varuṇa vīthi, Vighneśvara vīthi, and Brāhmaṇa vīthi. In all these paths, all castes such as Brāhmaṇa, Kṣatriya, Vaiśya and Śūdra can build houses. Four vīthiś are not suitable for house construction, such as 1. Yama vīthi, 2. Agni vīthi, 3. Nāga vīthi, 4. Paiśāca vīthi.

The land which has a high western side and a low eastern side and a water flow towards eastern side is called as Goviśthi. This is also suitable for house construction. A land having a high Vāyu koṇa and a low Agni koṇa with water flow towards that koṇa is called a Agni vīthi. A land having a high northern side and a low southern side with water flowing toward south is called as Yama vīthi.

In this land the idols of gods will be installed in each corners. In eastern side Jaya, Indra, Āditya, Satyaka, Antarikśaka and Drśa will be installed. In southern side, the idols of Vidadhār, Mrka, Dvāraka will be installed. Moreover in the south, Varuṇa, Vāyudeva and Vivasvān In south west side Mitra will be installed. In the northern side maheedhāran, in the Īśana koṇa (north-east) Āpa and Āpavalsa, in Agni koṇa, Savya and Sāvitra and other koṇas Indra and Indrajaya, in Vāyu koṇa Rudra and Rudrajaya will be installed. Inside at the right central part Brahma also will be installed.

Along with all these topics, the book describes the needs and uses of each room. The room at the eastern side is used for fire ceremony, god ceremony, sacrifice ceremony. The rooms in the northern side are used for the women and children and the Brahmin women lived in the eastern room. The room at the south side are used for the guests. Dharma Goddesses’ ceremony is conducted in this room itself. The western room is used for collecting and keeping wealth and treasure. The excess rooms are used for the study and sleeping. Rooms in the Nīrīti koṇa (south-west) are used
for preparing food and its consumptions.

A pond has to be built up in the *Indrapatha* (eastern side) or *Varuṇapatha* (western side). The kitchen should be built in *Agnipatha* (south-east). The Oottupura (dining hall) should be built in front of the kitchen. The well has to be built near the dining hall and kitchen. Besides this the store room should be built near the kitchen and dining hall. The paddy should be stored in the Nirṛti *kona* (south-west). The cow shed should be built up in the *Varuṇapatha* (west).

*Mandapasāḷā*, for the sitting of king and Brāhmaṇas, should be built in central portion and this place can also be used for ceremonies and worship and for receiving guests. The next step describes how to find out strong and pure land. If a path is there in between both lands no faults will come to others. The next step describe the installation of Thazhika kudam in the house. It is installed in the ceiling being constructed by polished *kazhukkol*. Thazhika kudam is covered by a round of iron strip. It must have a *panca kumbhādi*. Its end must be like lotus buds. Its upper portion must be built by strong metals like copper, silver etc. having the resistance power against rain, sunlight, wind and fog.

The next portion describes the construction of ceiling and how to make strong pillars etc. This paper is an attempt to explain the knowledge of indigenous Indian architecture and its usage in modern house construction.
Every religion has associated with it a shrine of some sort or the other. The nature of the shrine varies according to the religion it is associated with, as also its symbolism is perceived differently in each religion. As far as Judaic shrines are concerned, they are the ones belonging to a most ancient tradition that is still to be observed. At present, the Jewish religious institution is the Synagogue. And it has been so for over two millennia now. And yet, it is a fact that a decentralized religious institution like the Synagogue was not the original concept in Judaism as far as a monument of worship was concerned. At the core of Judaism, the concept of religious institution was a centralized one—first in the form of the Tabernacle of Moses, and later as the Temple of Solomon at Jerusalem the relics of which still remain. The concept of Synagogue originated even later, as a consequence, quite strangely, not of any religious developments, but rather due to the socio-political ramifications of the times. The present study is an attempt to trace this development of Hebraic shrines from the Tabernacle to the Synagogue.

"Like every other object of human enquiry, Architecture may be studied from two distinct points of view. Either it
may be regarded statically, and described scientifically as a thing existing, without any reference to the manner in which it was invented; or it may be treated historically, tracing every form from its origin, and noting the influence one style has had upon another in the progress of time."—James Fergusson (*Encyclopaedia of World Architecture: From the Earliest to the Present Times*, vol.1).

This study is an enquiry from the second mentioned perspective; for, taking a case study, it looks at the development, or rather transformation the architectural concept of a religious institution has undergone over time. Here the case, as mentioned in the title, is of the shrines in Judaism. As you all may well be aware, Synagogue is the religious institution, the place of worship, for the Jews. And yet, in this enquiry, I am not searching for traces of development of Synagogues; simply because of the fact that, as far as Judaism is concerned. Synagogue has not always been the holy shrine. In fact, considering the very deep antiquity of the religion, Synagogue is a relatively later, much later institution.

Let us look at the beginnings now. Though material or archaeological evidences are lacking for such shrines of the ancient past, there are vivid literary references which occur mostly in the very scripture the Jews themselves adhere to, namely the *Torah*. The other literary sources include the writings of the early century writers, Philo of Alexandria and Josephus.

Regarding the shrines referred to in the scripture, the first significant one is the Tabernacle built by Moses during his wanderings in Mt. Sinai. There are, of course, references to altars erected even before the time of Moses. Noah, Abraham, Jacob and others have set up altars at various times in various places. But there is no detailed account of such altars, other than just the mention of them being erected. The first detailed account of a shrine comes in the *Exodus*
which relates to the building up of the Tabernacle upon the command of God who instructs Moses giving precise information regarding the measurements, the plan and such objects as the seven-branched candle stand (menorah), the table for Unleavened Bread, and so on. And accordingly, the shrine was erected and was known as the Tent of the Lord’s Presence. In the Tent was kept the Commandment-Tablets in a chest known as the Ark of the Covenant, in the Most Holy Place which is separated by the Holy Place by a curtain. Another chief feature of the Tabernacle was the sacrificial altar.

The next significant shrine mentioned in the scripture is the Temple of Solomon in Jerusalem of which only the portion of a fortified wall remains known as the Wailing Wall. The Temple was built not in accordance with the measurements used in the Tabernacle, but made splendid and enlarged in proportion, in accordance with the king’s might and wealth; though the basic plan conformed to that of the Tabernacle, with the interior division into three parts, viz. a porch (ulam), a sanctuary (hechal) and the Holy of Holies (debir); just like the porch, the Holy Place and the Most Holy Place of Moses’ Tent. The Temple was destroyed and reconstructed several times and during each phase; various cultures had their influence on the Temple architecture and art; until its final devastation by the Roman Titus in AD 70. Nevertheless, this Temple became more renowned and significant than the Tabernacle.

In the case of a Synagogue, there are no literary references concerning its architecture during the beginning stages. Its origin and development must be traced from the historical milieu, the socio-political developments of the times triggering the transformation in the mode of worship amongst the Jews.

During the Babylonian invasion of Jerusalem in 586 BC, many Jews were exiled to Babylon. This made it impossible for these Jews to continue their worship in the Temple and
they found themselves secluded amidst the belief system of the new place. Many of them gathered together to pray and read the *Torah*, to make amends for their inability to go to the Temple and as a way to hold on to their faith in whatever way possible. Prophets like Ezra and other scholars of the scripture preached that it is not necessary that one should go to the Temple, for the Lord dwells in one’s heart and it would do to believe in the One and hold on to the commandments in the scripture and keep up the Covenant wherever one is.

The Jews, thus, began to gather and read the *Torah* and this became their chief mode of worship. Many scholars consider these assembly halls to be the beginning of Synagogues. And these were only simple chambers or houses meant for the purpose without any regulation regarding the plan or architectural features. Besides the reading of the *Torah*, matters of religious importance began to be discussed in these gatherings. Later, when Jerusalem came under the rule of the Persians, the Jews were allowed to return and the ones who came back continued the mode of worship they had practised while in exile. Besides, many of these Jews lived far away from the Temple that it was still difficult for them to go there for daily worship. Hence, as in the land of exile, assemblies began to be held in the homeland too. Thus, side by side with the worship at the Temple, that at Synagogues, too, began to gain importance. The Jews, however, used to make pilgrimages to the Temple, at times.

With the total destruction of the Temple in 70 AD Synagogues began to be more and more popular and increased in number. And yet, none of them ever had the position the Temple once had, as is evident from the importance Jews give to the Wailing Wall and the pilgrimage they make, from various parts of the world, to pray and mourn for the loss of the Temple. In a way, the Synagogues helped to reorganize the religious and social life of Jews
and to safeguard their spiritual heritage, even after the fall of Jerusalem and its Temple.

Regarding literary references for Synagogues, nowhere in the Old Testament, the term is used for any institution; while in the New Testament, mention of Synagogues can be found in numerous places. There are references to Synagogues at Capernaum, Galilee, Jericho, Nazareth, and other places in and around the present Israel-Palestine region. Excavations in the Biblical lands have also revealed structures ascribed to as Synagogues – at Masada, Herodium, Gamla, Baram, Dura-Europos etc. Obviously, by the 1st Century AD, the Synagogues had become well established religious institutions. And later, as the Jews began to spread into various parts of the world, Synagogues began to be established in those places too.

The Synagogues, in general, have an Ark placed in or near the wall facing the direction of Jerusalem, in which the Torah scrolls are kept and which is covered by a curtain known as the parokhet; and a pulpit, though placed in the centre traditionally, can be found variously placed in different Synagogues. The Ner Tamid or the Eternal Lamp is lit in all Synagogues. The Synagogues have separate galleries for women the placement of which also differs.

In spite of the fact that there had been numerous Synagogues, as indicated by the literary and archaeological evidences, there is hardly any homogeneity or universality in the Synagogue architecture. The reason for this can be found in the disturbed history of Jews who were most often in exile in various lands. The architecture of any form develops when there is a prolonged settlement at a particular place which never happened with the Jewish communities. Even in their homeland, they very frequently faced social, political and religious chaos that such aspects as art and architecture adopted kept changing in accordance with time and circumstance.

The Synagogues which began to be set up in various
countries, adopted the architectural features of the native local tradition. As such, Synagogues of various places are far different from one another. Also, the Synagogues belonging to various sects like the Sephardim and Ashkenazim also differ.

The excavations reveal Synagogues of various kinds having different plans. The larger ones were colonnaded with the hall being divided into nave and aisle by the supporting columns. Almost all Synagogues seem to have had the main chamber and the porch in front of it and the pulpit in the centre of the sanctuary. Benches were arranged lining the walls. And though no arks were recovered, images on mosaic floors or walls show them to be double-doored chests over which a curtain was hung.

As obvious from these descriptions, the Synagogue, the Temple and the Tabernacle, though belong to the Hebraic tradition; differ in many respects; not only in architecture, but also in the mode of worship. A community house, Synagogue serves not as a place of worship alone, but as one of assembly and study as well. It is the centre of the Jewish religious and social life. And regarding architecture too, its beginnings show that the ‘gathering’ was more important than the ‘structure’; worship could be conducted as far as there is a quorum known as the minyan, i.e. the presence of at least ten males above the age of thirteen.

The Synagogues did adopt some element of the old tradition, the chief of them being the importance given to the Ark. The earlier Synagogues seem to have had portable chests like the original Ark of the Covenant, while the later arks were fixed ones inserted into the Synagogue wall facing Jerusalem as are found in the present Synagogues, too. In the place of the inscribed Commandment-Tablets, Torah scrolls of parchment are kept in the arks. Other objects, like the menorah, for instance, of the Tabernacle times are still kept. The pulpit or the reading desk was a new feature in the Synagogue. The prophet Ezra is said to have been
the one who first used a raised platform from where the Torah was read. The arrangement of the ark, the pulpit and the porch in front of the sanctuary in the Synagogue in a vertical axis is also akin to the tripartite division of the older tradition.

Most architectural forms evolve from the simple to the complex, passing through several phases; keep adding on various elements in each, before eventually culminating in its final stage, from whence it stops its development. The Hindu temple had its structural beginning in a single cell, to which the ardhamañḍapā was added, attached to it, which got detached from it at a later stage forming a separate mañḍapā, meanwhile adding on other elements as well, to finally form the pañcaprākāra. The Buddhist Stūpa, likewise developed from a simple mound to the evolved ones as seen at Sanchi, Sarnath, etc., complete with the torāṇas, harmikā, catra, and the circumambulatory passages. And so in almost all forms of architecture. In the case of Hebraic shrines, however, there has not exactly been an evolution from the simple to the complex. It has been a change in other ways, as evident from the descriptions of details explained here. The transformation is not simply architectural alone; but is also conceptual/ideological; as well as functional. In fact, the transformation in architecture is because and as a result of the conceptual transformation behind it. The focus of the Tabernacle worship was the sacrifice and there was an altar for that. There also existed segregation; for, only the High Priest could enter the Most Holy Place. More or less similar is the case of the Temple. And both the Tabernacle and the Temple were centralized institutions, each being the only one of its kind. The Synagogues, on the other hand, far differ from these. Synagogues are not centralized shrines, but could be established anywhere. And, as stated earlier, they served in the form of assemblies, having no segregation among the groups. The reading of the Torah became the main service and sacrifice was altogether abandoned.
The development of Hebraic shrines, from the Tabernacle to the Synagogue, is also indicative of the socio-cultural milieu of the times. Culture is dynamic, and its many vagaries are reflected in its various facets, be it in literature, art, or architecture. And the story of the Hebraic shrines is a testimony to this.

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CONSTRUCTION OF PLAYHOUSE IN THE NĀṆṆAŚĀTRA

RENJITH RAJAN

The term ‘architecture’ means, the art or science of designing and constructing buildings and other physical structures. Indian architecture is as old as the history of civilization. The earliest remains of recognizable building activity in India dates back to the Indus Valley cities. Among India’s ancient architectural remains, the most characteristic are the temples, caityas, vihāras, stūpas and other religious structures. In ancient India, temple architecture of high standard developed in almost all regions. The distinct architectural style of temple construction in different parts was a result of geographical, climatic, racial, historical and linguistic diversities. Ancient Indian temples have a hall to present the art forms which is known as Nāṭyamandapa or play house because the temples serve an important part in the development of dramas. The hall is considered to be as sacred as the temple sanctum itself.

References to architecture are found in ancient literatures like the Vedas (Rgveda, Yajurveda, Sāmaveda, Atharvaveda) and Sthāpatyaveda, an Upaveda of Atharvaveda. Ancient literature has the references and knowledge about
construction of buildings from houses to forts, palaces, temples and yajnasalas. Lord Buddha is supposed to have given instructions to his disciples about the construction of Viharas.

The Nāṭyaśāstra of sage Bharata, the first work on drama and dramaturgy, belongs to the second century BC. In this work the author deals with all the aspects of a drama. The treatise has thirty-six chapters. Minute aspects of a drama are depicted there in detail. After the description of the origin of drama Bharata pays first importance in the description of play house or Nāṭyamandapa. A Nāṭyamandapa is an integral part in the staging of a drama. Presentation of a drama is not that much effective without a play house. So Bharata, the master of dramaturgy gives ample space in the description of playhouse.

In the first chapter he describes the incident, which led to the formation of the first Nāṭyamandapa. At first in the Indradhvaja festival, the play Amrtamanthana was presented without a Nāṭyamandapa. All of the spectators were pleased and eager to watch the drama. But when the performance relating to the killing of the Daityas and Dānavas began, the Daityas who came there instigated by the Vighnas with Asuras paralysed the speech movement as well as memory of the actors. Then Indra took the banner staff and smashed the Vighnas and Asuras. After the incident Bharata along with the Devas approached Brahmā and asked him to enlighten him on the means of the protection of the drama. Hearing that Brahmā asked Viśvakarman to build a playhouse of best type to protect drama from the Vighnas and Asuras. Thus he created the playhouse.

Then in the second chapter Praksagyakhalaksana, Bharata provides valuable information on domestic architecture and the construction of a playhouse in detail. He says that Viśvakarman devised three types of theatres according to the Śāstras, viz. vikrṣta, i.e., rectangular, caturasra, i.e. square, and tryasra, i.e., triangular. Each of these three again falls
into three kinds according to size: jyeṣṭha, i.e. biggest, madhyama, i.e. middle-sized; and kaniyas, i.e., small. Of these three, Bharata asks to choose the middle-sized for the best visual and audio effect. A reading of the verses here would give the idea that the biggest is for the Devas, the middle-sized for kings, and the small for the people. Abhinava’s commentary here gives original interpretation, that if Bharata assigns the biggest theatre to the Devas, it means that the people who present the drama should resort to the biggest to enact such kinds of dramas as the ḍima in which occur fights between the Devas and the Asuras and consequently much space is wanted. If the romances of a king’s private life have to be enacted, the middle-sized theatre is enough for this purpose and must go to the small theatre when the monologue, Bhāna plays in which ordinary men and women are characters. Bharata asks mortals not to compete with the very big theatres of Devas because mortals must build with great trouble while they do things by mere wish. Bharata recommends the middle-sized theatre to the mortals.

General instructions

Bharata states so many steps in accordance with the construction of a playhouse. He describes so many ceremonial functions also in each step in accordance with the construction of a playhouse such as dānakarma of various things like jewels, cloth, food, cow, etc. to the Brahmins. The first step is the selection of a suitable site. The preparation of the plot described there in detail. He says that an expert builder should, first of all, examine a plot of land and then proceed with a good resolve to measure the site. A playhouse should be erected on a soil which is plain, firm, hard and black and not white. It should first of all be cleared and then scratched with a plough; and then bones potsherds as well as grass and shrubs growing in it, are to be removed. The ground after being cleared should be
measured out with a piece of white string which may be made of cotton, wool, muñja grass or bark of tree.

**Vikrṣta**

After this the builder should measure a plot of land 64 hasta long and divide the same into two equal parts. The back portion will be divided again into two equal halves. Of these the back portion should be again divided equally into two parts, and one of these halves will be made the raṅgaśīrṣa and on the part at the back the nepathyā.

Having divided the plot of the land he should lay in it the foundation of the playhouse, with the assistance of the sounds of musical instruments like saṅkha, dundubhi, paṇava, etc. After laying the foundation, the pillars of the play house have to be raised. Bharata makes rules on this. He dedicates four main pillars to the four castes even as portions of the whole theatre to the various gods for the sake of protection. Then he comments on the construction of Mattavāraṇi, the floor which is prepared on both sides of the Raṅgapīṭha. This should be furnished with four pillars and should be equal in length to the stage and its height should be one and a half hasta. The Raṅgamaṇḍapa should be equal in height to that of the two Mattavāraṇi-s. After this the Raṅgapīṭha should be constructed. In the construction of the Raṅgapīṭha Bharata primarily gives notes on the construction of raṅgaśīrṣa or the stage. The raṅgaśīrṣa should include six pieces of wood. Here it is that the actors make offerings and pūjā before the drama begins and wait during the drama when they have dressed themselves up. Abhinava says that if the stage is imagined as a man lying on his back, this space called the raṅgaśīrṣa will look like his head. The nepathyā or the trying room should be furnished with two doors. While filling up the ground marked for the raṅgaśīrṣa the black soil should be used with great care. The earth is to be made free from stone chips, gravel and grass by the use of a plough, to which are to be yoked two white draught
animals. The interesting thing there instructed by Bharata is that who should be employed in the job. He strictly instructs that the employees should be free from physical difficulties of all kind. The surface of the Raṅgāpitṭha should not be like the Kūrmaprśṭha (high at the centre and sloping on all-sides like the back of a tortoise), or the Matsyapṛṣṭha (high along the centre and sloping on both sides like the back of a fish). It should be smooth like the surface of a mirror.

The playhouse should be made like a mountain cave and it should have two floors on two different levels and small windows and it should be free from wind and should have good acoustic quality. The erection of the walls is then described. The whole hall must be richly decorated with wood-work, representing creepers, birds, animals, etc. The walls must be decorated with beautiful paintings of pictures of pleasure, of men and women and of creepers and trees, after the walls have been made smooth and white by sudhākarma. One should start the wood-work with many artistic pieces such as decorative designs, figures of elephants, snakes, tigers, etc.

In respect of the seating arrangements also, Bharata’s theatre was perfect. He says that the seating arrangements should be in the form of a gallery—sopānākṛti. The seats should be either of brick or of wood. They should be one and a half feet high above the ground, to give a good view of the Raṅgāpitṭha.

Bharata paid due attention to the acoustic properties of the theatre also. He says that 64 × 32 hastas is the maximum size for a theatre and that one should not exceed that measurement. He praises the middle-sized one among the three kinds of houses. The reason he gives is, this: “Constructors should not build a theatre of a greater size, for the Nāṭya would become indistinct. If the hall should be very big, the actor’s voice would either become indistinct or bad on account of the necessity for the actors to shout out.
The colour of the face or the tune of the varying *rasa* and *bhāva* would become indistinct owing to the largeness of the house. Therefore, of all halls, the middle-sized is the best, for here the instruments and songs would be heard beautifully well.” Again he says that the stage should be like a cave in a mountain without very large windows, so that there might be a clear and audible sound effect. Even the windows should be fitted with aperture doors so that there might not be too much air.

*Caturasra*

Bharata then describes how to construct the *caturasra*, measures 32 *hastas* on both sides. In this type the *Raṅgapīṭha* is smaller naturally. The entrance to the green-room should be only one. In other respects, the construction of this type should follow the instructions given as regards to the rectangular. Just as in the rectangular type, the *Raṅgapīṭha* is also rectangular; in the square type the *Raṅgapīṭha* is square. In the rectangular the *raṅgasīrśa* is a little higher than the—*Raṅgapīṭha* while, in the square, both are on the same level. Its outer walls should be made with strong bricks very thickly set together. And inside the stage and in proper directions, the architect should raise ten pillars capable of supporting the roof. Outside the pillars, seats should be constructed in the form of a staircase by means of bricks and wood for the accommodation of the spectators. Successive rows of seats should be made one *hasta* higher than the floor. And all these seats should overlook the stage.

In the interior of the playhouse six more strong pillars capable of supporting the roof should be raised in suitable positions and with proper ceremonies. And in addition to these eight more pillars should be raised by their side. Then after raising *Raṅgapīṭha*, eight *hasta* square, more pillars should be raised to support the roof of the playhouse. These pillars should be properly fixed to the roof and be decorated with the figures of *śālāstrī*. 
After all these have been made, one should carefully construct the *nepathyā*, it should have one door leading to the *Raṅgapīṭha* through which persons should enter with their face towards the spectators. There should also be a second door facing the auditorium. The *Raṅgapīṭha* of this type should be eight *hastas* in length and in breadth. It should be furnished with an elevated *vedikā* or *Raṅgapīṭha* with plain surface. Its *Mattavāraṇī* should be made according to the measurements prescribed before. The *Mattavāraṇī* should be made with four pillars by the side of the *vedikā* of equal to it in height. In case of a playhouse of the *vikṝṭa* type it should be higher than the *Raṅgapīṭha*, whereas in a *caturasra* type it should have a height equal to that of *Raṅgapīṭha*.

**Tryasra**
Then Bharata describes a *Tryasra*—triangular theatre. The speciality to be noted in its construction is that the *Raṅgapīṭha* here is triangular and has an entrance into the green-room at its back angle. As regards the entrance gates to the audience hall, Abhinava says that they may be three, perhaps one on each side.

Concerning the size, measurement and types of theatres in general, Abhinava says that altogether eighteen kinds of theatres are possible as spoken of in the Śāstras.

**Conclusion**
While examining the remarks of Bharata on the making of a playhouse and employing of the workers one can understand the application of the principle of *aucitya*. He firmly suggests that the *madhyama* type of playhouse is proper one. Because the dialogues as well as the songs in it may be heard by the spectators.

_Preksāyānāṃ sarvesāṃ tasmān madhyamamamisyate/
yasmat pāthyaṃ ca gṛyaṃ ca sukham śrāvyataram bhavet_//
II. 21

By owing the words of the Nāṭyaśāstra itself, we can conclude that there is no knowledge, no art or craft, no device, no action in the world that is not found in the Nāṭyaśāstra.

“Na tajjñānam na tacchilpaṁ na sa vidyā na sa kalā
Na sa yogo na tatkarma nāṭyesmin yanna dṛṣyate”

I. 116

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ARCHITECTURE OF ANNAMALAI NADHAR
MAHADEVA TEMPLE

Ambily C.S.

Kerala lies on the south-west coast of India and is considered to be the land of temples. Kerala temples are conditioned by the zone of location, regional affiliation, the raw materials and climatic factors. Generally, the temple complex of Kerala falls under the pañcaprākāra scheme of architecture mentioned in the early texts. Pañcaprākāra denotes five enclosures around the Śrīkovil. They are: 1. Akaṭhe Balivattom. 2. Chuttambalam. 3. Madhyahara. 4. Bāhyahara and 5. Maryādā. Temple is known as different names in different places such as devālaya, devakula, kovil and mandira. In the works of Paṇini and Patañjali temples are mentioned as Prāsādas and the Śatapatha-brāhmaṇa of the period of the Vedas mentioned temple as altar. The Vedic books describe the plan of temple as square and it is divided into 64 to 81 smaller squares, where each of these represent a specific divinity.

Annamalai Nadhar Mahādeva Temple situated at Karikkode, eastern part of Thodupuzha in Idukki District of Kerala is a proud example of Kerala’s rich cultural heritage. The Temple faces south which is a rare phenomenon among the temples of Kerala. It is solely constructed by using granite blocks and the garbhagṛha of it
is rectangular in shape. The Temple is also unique in Kerala since the Temple houses about thirty-five bronze images.

**Literal meaning**

The literal meaning of the name of the temple is the temple of Mahādeva (Śiva), protector (Nadhar) of Annamalai. This indicates that either the place was once known as Annamalai or Śiva of this temple is the protector of a place somewhere else with the name of Annamalai.

**Previous works**

Unfortunately there is not much literary evidence available regarding this Temple. Though there are few articles in popular magazines and newspapers like the Jyothishasree, Manoramā supplement on this temple, no in-depth study, focusing on its antiquity, architecture, art, reasons for housing bronze icons and features of these icons have been done so far by any of the scholars.

**Objective of the study**

The present paper is an attempt to discuss the architectural features of Annamalai Nadhar Mahādeva Temple and its antiquity. For this purpose available published data and information collected from the interview of K.R. Sudhakaran (Chairman of the Annamalai Nadhar Mahādeva Temple Renovation Committee) and main features of the Temple were photo documented. The Temple is in a dilapidated condition and now in the process of getting renovated.

**Legends**

There are mainly three legends associated with this temple

1. **Associated with Pāṇḍyas**

   The Pāṇḍya Dynasty of the Middle Ages was divided into small nadus. The king ruled the dynasty as a whole at the capital and the nadus were ruled by the brothers
or relatives of the king. Thus, there were nādu like Anchnadu, Kovilmalai, Arakkulam, Annamalai, etc. known far and wide. So it is believed that the ruler of the Annamalai built this temple.

2. Associated with the Cholas
The tradition says that the history of the Temple begins from Rājārāja and runs through Rajendra Chola, Parantham Thevan, Kovil Malayil Thevan and ends at the Maharaja of Vadakkumkoor. It is believed that there were nātyamanḍapās, dḥvajas, temple pṛakara walls, etc. were built by famous craftsmen of that period. It is believed that this temple was one among the sixty-four temples built by the Chola rulers.

3. Associated with a community migrated from Thenkasi
According to this legend the granite temple was built around thirteenth century and owned by a community (Ṣaiva vellalas) migrated from Thenkasi.

Architecture of Annamalai Nadhar Mahādeva Temple
In Kerala, rock cut temples are considered to be the forefathers of early structural temples. The earliest evidence of structural temple dates back to the ninth century AD. Architecturally the temples of Kerala passed through three stages, they are: 1. early phase (AD 800-1000), 2. Middle phase (AD 1000-1300) and 3. Later phase (AD 1300-1500). In early phase temples were built in square, circular and apsidal plans. Oblong and rectangular plans were also in vogue. Both sāntara and nirantara temples were popular and many temples had four functional doors, conforming to the sarvatobhadra type. In the middle phase emergence of more than one pradakṣiṇapatha, the appearance of dvitaḷa, tritaḷa vimāṇa, detached mukhamanḍapa, etc. are the important features. In the later phase, temple architecture reaches its final stage of evolution. Emergences of multi-
shrined temples, additions like dhvajastambhas, vilakkumadam, koothambalam, theppakkalam are the important features of this phase.

Annamalai Nadhar Mahadeva Temple has a garbhagrha and an attached pillared mukhamandapa.

**Elevation**

The general features of Śrīkōvil are Adiśṭhāna, Sopāna, Praṇāla, wall or Bhitī and Roof.

1. **Adiśṭhāna**

Adiśṭhāna is the basement and it has vertical moulded tiers. Tiers from bottom to top are arranged in specified order and each has specific shapes and distinct names. The Adiśṭhāna of the Annamalai Nadhar Mahādeva Temple has pādukā, jagatī, kumuda and gala-paṭī.

2. **Vedika**

Vedi or vedikā is a railing and it is seen above the Adiśṭhāna. The vedikā portion of the Annamalai Temple has gala, padma and kampa as components.

3. **Bhitī or Wall**

The bhitī starts from the vedikā. Generally the bhitī portion of Kerala temples is either made of granite or laterite blocks; sometimes the bhitī portion is plastered. In this temple it is made of granite and is without any plaster. The decorative elements seen on the wall portions are gavākṣa, karṇakūta, kudhya stambha, nāsikā, paṇjara, prāśāda-duvāra and ghanaduvāras. There are three ghanadvāras seen on three side walls of the Śrīkōvil of this temple. Ghanadvāras have pilasters on both sides and toranās above with kirīṭamukha at the top. The walls also have gavākṣas with jalli works. The gavākṣas on the western side wall of the Śrīkōvil has five perforations and the eastern side has nine perforations. The jams and lower part of the main door have decorative floral
elements. Some shallow depressions are seen at the base of the southern wall of the Śrīkovil.

4. Roof

The roof of the Śrīkovil of Kerala temple is constructed in different ways; the earliest and small temples have square granite floor. But majority of temple roofs are constructed in wood and covered with copper or terracotta tiles. The shapes varies in accordance with ground plans. In Annamalai Nadhar Mahādeva Temple, the roof is made of granite and is flat. Flat-roofed temples are rare in Kerala. At the base of the roof there are some arched niches with human faces decorating them.

5. Pranāla

The pranāla is an important part of the Śrīkovil and it is for draining out lustral water from sanctum. Pranāla of various shapes,—circular, many faceted, rectangular and ornamented are noticed in Kerala temples. The pranāla of this temple is seen on the northern side because the Śrīkovil faces south. The pranāla issues from a vyālimukha and ends in the form of a flower. It has excellent carvings.

PLAN OF THE TEMPLE

1. Garbhagṛha

Garbhagṛha is the innermost part of the temple. The Garbhagṛha may be enclosed by an inner wall (anīgar bhitti) and an external wall (bāhya bhitti). The ambulatory passage in between these two walls is known as sāntara. In case there is no inner wall it is known as nirantara type. The Annamalai Nadhar Mahādeva temple is a nirantara type of temple. The main door of the Garbhagṛha faces south. It is rectangular in shape.
Piṭha

There is a piṭha at the center of the Garbhagrha. Here the Śivalinga is placed. There is a platform at the back side wall in east-west orientation. This was used to place idols while.

2. Mukhamandapa

The flat-roofed Mukhamandapa is supported by four pillars. The central two pillars are with decorations and other two are comparatively simple. The pillars have various parts like oma, kāṇḍa and pothika. The pillars of this temple has a rectangular (lower) and two square portions (middle and top). The central pillars are decorated with the images of Śiva and Parvatī, devotees flanking Śivalinga, Śāsta, sages and Vyāgapatha, Nāgabandha and floral decorations.

Sopāna

The approach of Śrilakṣi is through sopāna. The sopāna of Annamalai Nadhar Mahādeva Temple is attached to the Mukhamandapa. It has four direct steps and balustrade with decorations on either side.

Analysis and Conclusion

Unfortunately there are not much literary evidence available regarding this temple. In his book entitled Temples of Kerala Jayasanker states that Annamalai Nadhar Mahādeva Temple is built in Chola style of architecture. Analysis of the architecture of this temple shows features similar to the Chola style. The peculiar early Chola style of this flat roof and pillared Mukhamandapa is indicative of this fact. The pillars are beautifully decorated with cut works. The oma, kāṇḍa and pothika divisions and the sculptural representation of the pillars shows similar features found in the temples of the Chola period. The entire temple is constructed using granite and the rectangular plan of the Garbhagrha indicates that this is one among the temples of the early phase. Cholas established friendship with Chera kings and were engaged
in matrimonial alliances. The Chola King Rājarāja Chola had matrimonial alliance with a Chera king. His wife had a habit of donating icons. This relationship might have resulted in bringing the artisans and thereby the Chola style initiated into the structures made at that time.

But according to the legend, this temple was built by Pāṇḍya kings. This may be said due to the frequent conflicts between Cholas and Pandyas. Both of them enjoyed victories every now and then. So the temple might have been built by Cholas or Cheras in Chola style and this place later believed to be under Pāṇḍyas. It is also said that the bronze work in Kerala is a heavy imitation of that which flourished in the kingdom of the Cholas. The iconographical features of bronze idols show similarities with Chola bronzes (conical kirīṭa, necklaces, etc.). Besides these we have strong evidence regarding the relationship between this temple and Chola kings. The pīṭha of the mirror with prabhā recovered from this temple is now placed in Kayamkulam Museum has an inscription, written in Tamil grantha on its stand. Though the inscription is not fully deciphered, the close observation reveals that each line of this inscription ends in a word “cholai”. So there must be some relationship between the bronzes of this temple and Chola Dynasty. One sentence of the inscription deciphered runs like this “Nallamukuram cheychatha cholai” which meant the Chola built the beautiful mirror. So a member of Chola dynasty may be the person who donated the mirror, most probably as well as some idols to the temple. The name of this temple is an indicative of Tamil influence. The literal meaning indicates that either the place was once known as Annamalai or the Śiva of this temple is the protector of a place somewhere else with the name of Annamalai. There is a famous temple called Thiruvannamalai in Tamil Nadu. It was constructed by the Chola kings. All these points help to conclude that there was definitely some Chola connection to this temple. Though the exact date of the construction
of this temple cannot be exactly ascertained, approximately this might have been built between tenth to eleventh century AD.

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KERALA'S CONTRIBUTION TO ARCHITECTURE

KIRAN A.U.

The land of Kerala has a resplendent tradition of cultural innovations in various spectrum like Dance, Drama, Architecture, Music, Iconography and so on. Among the different aspects of cultural formation Architecture stood in the first position due to its direct intervention to lives of every person. We have a long tradition of architectural literature which exposes the varied aspects of Kerala Architecture. Among these texts, ‘Vastusāstra’ which is considered to be the fourth ‘upaveda’ gives a comprehensive information regarding the architectural glory of ancient Kerala. The term ‘vāstu’ is derived from the root ‘vas’ which means to live. There exists a plethora of sources regarding the Architectural peculiarities of Kerala which include Tantrasamuccaya of Chennas Narayan Nampoothiri, the Vāstuvidyā of Tirumangalathu Nālakanihanmisat, Manuṣyālayacandrikā and the Devālayacandrikā of Thirumangalathu Nilakanihan Mīsat, the Śilparatna of Śrikumāran Nampoothiri, the Prayogamañjari, the Mayamata, the Śilpaśātra, etc. are the prominent works in this regard and there are some anonymous works too.

Kerala produced a few manuals in Sanskrit which give a detailed information regarding the architectural pattern of ancient Kerala, which even today stand as authoritative treatises on Architecture. The Tantrasamuccaya (1427-28 AD) the
Manusyālayacandrīkā (between fifteenth and seventeenth centuries Devālayacandrīkā (fifteenth, seventeenth century), Śilparatna (sixteenth century) and Vāstuvidyā are notable works in this field.

Tantrasamuccaya (fifteenth century AD)

The Tantrasamuccaya of Chennas Nārāyaṇan Nampoothiri is a commendable treatise on temple architecture, sculpture and rituals. It is an unquestionable authority on the laws and methods for the construction of a shrine, installation of the idol, daily worship, renovation, reconstruction and allied rituals. The entire work is divided into twelve pātalas consisting of 2896 verses.

A general sketch of the topics in the twelve sections may be given as follows:

1. Details regarding the selection of a Guru, the selection of the site for the construction of the temple, the ceremony of the Nidhikulana—a potful of riches, laying of the bricks, the placing of the foundation stone and the selection of suitable granite for the construction.
2. Characteristics of the temple proper called prāsāda, its measurements, the details of the construction, the characteristics of the idol and its seat, types of idols and their measurements, Balipithas—the oblation stones, and the measurements of the five-fold fortifications.
3. Purification of the site, sowing of the seeds in the site to test its fertility, preparation of the idol, ceremonies connected with the cleaning of the temple, placing of the idol in water and its further purification and related rituals.
4. Purification of the manndapas, the temple halls, offerings of oblations to minor deities that guard the inner part of the shrine, the deities that guard the gate-ways, purifications of the spot where the
ceremonies with the *kalaśas* or pots filled with sanctified water are place, kindling of the sacred fire, worship of the bed to place the idol horizontally before installing it, and bathing of the idol with sanctified water. 

5. The fifth *pāṭala* of the work deals with the installation of the idol. *Adhivāsana homa*, and the rules and regulations connected with *pūjā*.

The sixth *pāṭala* provides a detail information regarding the fixation of the deity, consecration (*abhiśekha*), *mahābalipāda*, *nikṣepa*, etc.

The critic of the *Tantrasamuccaya*, i.e., *Vimarsini* by Chennas Sankaran Nampoorthiri (son of Chennas Narayanan Nampoorthiri) provides a deep insight into the work. The author informs that the work had received popularity and acceptance during fifteenth century.

*Śeṣasamuccaya*

*Śeṣasamuccaya* was an important work belonging to the Tantra tradition and the author is Kūnuśarma, the deciple of Cennus Nārāyaṇan Nampoorthiri. It is the complementary work to the *Tantrasamuccaya*. Cennas Śankaran Nampoorthiri, the son and successor of Cennas Nārāyaṇan Nampoorthiri. In addition to these Kuśikuttu Maheswarabhattathiri wrote a commentary on the *Śeṣasamuccaya*, i.e. *Śeṣasamuccaya Vyākhya*. Both the two works have popularity and authenticity among the *Tantris* of Kerala.
Manusyālayacandrikā

The Manusyālayacandrikā is a unique work dealing exclusively with the construction of residential buildings, which was compiled by Tirumangalattu Nilakanthan. It is believed that the work was composed during c. 15th century and it was a dossier connected with the then existing architectural literature and associated knowledge. The text has a pan Indian outlook in which the basic techniques, theories, and philosophy of Indian Vāstuvidyā pertaining to residential buildings have been consolidated and it is the most authentic text in this regard even now.

The text is divided into seven chapters. The first chapter starts with the list of texts referred to by the author. It deals with the guilds of craftsmen and duties of each guild. It also gives rules for the selection of land. In chapter 2, procedure for fixing the cardinal directions and the major reference lines are detailed. This chapter also contains prescriptions on the zoning rules in deciding the locations of the building. It deals extensively with the concept of ‘Vāstu purusāmandala’. The system of measurement used in Vāstuvidyā is described in chapter 3. It also deals with the rules for planning settlements. The architectural formula for orientation viz. the yoni concept and the astrological factors of āya, vyāya, etc. are also included in this chapter.

The chapter 4 deals with the characteristics of different classes of buildings while chapters 5, 6 and 7 describe the details of the different elements of the building. They also give details of location of the different facilities in a house and also of the subsidiary buildings like cattle-shed, entrance-gate, etc. The book is thus a comprehensive treatise on planning, designing and construction of residential buildings.

The Relevance of this work

There are more than a dozen commentaries on the Manusyālayacandrikā written in Malayalam. This shows the popularity and acceptance of the work as a standard one not only among craftsmen but also among laymen. The style and language of these books are such that they can be followed only by those who have some knowledge of ‘Vāstuśāstra’. Moreover, illustrations are very rare in these works. Hence an illustrated engineering commentary which gives emphasis to the technological aspects and which can be easily followed by all becomes important. This will specially enable engineers and architects to understand the philosophy, design theories and practices followed in India so as to enable them to integrate this knowledge with modern developments in engineering and architecture. This will definitely pave the way for evolving an Indian style which is relevant and appropriate in today’s India.

Devālayacandrikā

It is a work dealt with the construction of temples and idols for worship. Manuscripts of the text are not available in India. In its perfect form and the Malayalam commentary on the same reveals the existence and uniqueness of the work. After the introductory stanza the author mentions the rules for the selection of site for the shrine. The selected site is then measured and consecrated with ritualistic purifications. Then follows the details regarding the actual construction of the temple. The specifications of outer walls, pillars, sanctum santorium, drains, doorways, decorations on the walls, roofings, spires, halls, etc. are given. The manuscript ends abruptly with the verse 171, the last subject treated being the idol of Śiva.

Śīlparatna

The Śīlparatna was a c. sixteenth century composition dealing with Śīla by Śrikanmāna Nampoothiri and it is a comprehensive work which is concerned with each and every aspect of Śīla. The work was composed by the order and patronage of Champa-kassery Poojiamtirunl Thampuram.
The work gives information regarding sacred knowledge like citralakṣaṇa, vāhalakṣaṇa, dhanurlakṣaṇa, etc.

The commentaries are also mentionable, especially Śilparatnambhāna of a Nampoothiri of Thykkattillum. The work is otherwise known as ‘Thykkattu bhāsa’ or Adukke: it contains more than six hundred Maṇipravāla ślokas which gained great popularity among the carpenters (aśāriś) of Kerala.

Īśānaśivagurudevapaddhati

The Tantrpadhati also known as Īśānaśivagurudevapaddhati named after the author Īśānaśivagurudeva is an elaborate treatise dealing with the various aspects of Tantra. The work consists of nearly 18000 stanzas in various metres and divided into a total of 119 pātalas of varying length. The subjects explained are the construction of temples, consecration of idols, modes of worship, festivals, japa, homa, etc.

The work is divided into four parts namely: 1. Sāmānya-pāda containing pātalas 1 to 14, 2. Mantrapāda consisting pātalas 15 to 52, 3. Kriyāpāda having pātalas 1 to 64 and 4. Yogapāda dealing with pātalas 1 to 3. The first 52 pātalas form the pūrvārdha and the next 72 pātalas form the uttarārdha as designated by the author.

Prayogamaṇjarī

Among the Tāntrika works produced in Kerala the Prayogamaṇjarī often referred to simply as Maṇjarī is one of the earliest and most important compendiums. Later writers like Īśanaśivaguru and others have heavily drawn materials from it and considered it to be most authoritative. The work is conceived as a manual for the practical use of Namputiri Brahmins who are enjoined to perform rituals in Kerala temples.

The work starts with praising tutelary deity of the author i.e., Śiva. The concluding part reveals the identity of the author as Ravipaśṇita. The entire work has been divided into
21 paṭalas and the issues discussed are: ācārya parigrahām, bhāparigrahām, vāstuyogam, nārtakādhanam, garbhādhanam, prāśadalakṣaṇam, silālakṣaṇam, līṅgalakṣaṇa, ākṣā, aṅguram (pinnacla), jalaḥivāsana, raksākhaṇavāstu, līṅgasuddhi, adhivāsana, pratiśṭhā, arcanā, caturdhā, divasasnapana, utsavam and so on and so forth.

The Prayogamaṇjari explains almost each and every aspect of temple architecture and worship. The work is not dedicated to any god or goddess. It has got widespread momentum due to the perpetual usage by the Tantrics. During fifteenth century Trivikraman wrote a commentary named ‘Pradyota’ to Prayogamaṇjari.

Mayamata

The Mayamata attributed to Maya, the celestial architect was popular in Kerala and formed a source book for architecture for many Kerala writers like Nilakanṭha, the author of Manuṣyaḷaḷayacandrikā. Ullur unequivocally stated that Mayamata was a Malayalam work. Albeit Nilakanṭhan mentions two Mayamatas, but only one is found. The entire work is divided into 34 chapters, but scholars have the view that in addition to these 34 there may be four chapters more.

Conclusion

In brief, the researcher would like to mention some important findings and aspects regarding the Architecture of Kerala. It is a generally acceptable fact that the Malayalam works on architecture had their roots in the Sanskrit texts. The architectural styles like Nālukettu, Ettukettu, Pathinrukettu, Kihambalam, Chuttambalam, Śrikovil, etc. are based on these authentic texts. Similarly, the darśana (facade), foundation, position of the house (sthāna) etc. are determined by the rules and measures mentioned in these texts. Among these texts Manuṣyaḷaḷayacandrikā has been widely used as an authentic work for the construction of residential buildings. It is an interesting fact that modern
engineers are using our traditional works on Architecture for the construction and decoration of modern buildings. The structure laid in our ancient manuals are still followed in the modern construction purposes.

REFERENCES

2. Ibid., Paṭala. 6, verses 141, p. 293.
4. Transcript No. 20 of Trivandrum Manuscripts Library.
Building construction with plan and sketch seems to have come into existence in Kerala round about the dawn of the 9th century CE. The earliest historical record related to the construction of a temple in Kerala goes back to 823 AD in which year the famous Śiva temple at Kandiyur near Mavelikara was consecrated. From there onwards we get several references in inscriptions regarding the construction and consecration of temples. Regarding palaces and dwelling houses also there are references in old documents and early literary works, for instance Panaṅkāvil, Karippukkalam, Trppāppūr palaces and Viramāṇiķiyam, Veḷḷuṟ, Kuruvñāt, Kurumulikkal houses.

We get evidences of indigenous tradition of the architecture of ancient Kerala from the descriptions seen in the Uṇṇunilisandeśam, a messenger poem of fourteenth century CE on Śri Padmanābhasvāmi Temple at Thiruvanantapuram and Viramāṇiķiyam the dwelling house of the heroine Uṇṇunili at Kaduturutti. The earliest temples, houses and palaces were built of wood and bricks. Kerala architecture comprises temples and dwelling houses which were built of mud, wood and stone. The tradition is that houses of wood and stone were built only for kings and gods. Those who were out of cāturvarṇa (four caste system) had
to live in mud houses. Dwelling houses are found as adaptations of palaces in four or eight wings, *Nālukettu* or *Eṭṭukeṭṭu*.

Śrī Padmanābhaswāmi temple

Regarding the temple structure no description is seen in the *Uṇṇunilisandēsam*. The order given to the worship of the Gods installed in Śrī Padmanābhasvāmi Temple enables one to reconstruct the internal structure of that temple. The poet asks the messenger first to worship the chief deity Padmanābha and there after Lord Narasimha, Vedavyāsa, Viṣvksēna, Rāma, Lakṣmaṇa and Hanumān. After that the poet directs the messenger to proceed to the *Maṇḍapa* where Garuḍa is installed. Near the southern side of the *Maṇḍapa* the idol of Śrīkṛṣṇa is seen lying in a cradle. The poet asks the messenger to give salutation to that deity. There after the messenger entered the outer pathway to worship the lord Ayyappa installed in the shrine at the south-west corner. After worshipping the Ayyappa the messenger proceeded to the shrine of Tiruvāmpāṭikṛṣṇa situated in the north-west direction, which seems to be the oldest one in the Śrī Padmanābha Temple complex. Then the messenger proceeds to the shrine of Kṣetrapāla situated on the north side of the pathway and moves to the eastern side where the Valiya Balikkallu is situated and finally gives his obeyance to Śrī Padmanābha and went out of the temple through western gate.

The internal structure of Śrī Padmanābhasvāmi Temple at the time of the *Uṇṇunilisandēsam* (c. 1350-1390 CE) can be reconstructed based on the description mentioned above.
1. Anantaśayanam (verse 37, 38, 39, 40, 41)
2. Narasimhamūrtti shrine (verse 42)
3. Vēdavyāsa shrine (verse 43)
4. Viṣvksēna shrine (verse 44)
5. Rāma, Laksmana and Hanumān chamber (verse 44)
6. Garuda idols (verse 44)
7. Uṇṇikṛṣṇa lying in a cradle (verse 45)
8. Ayyappa shrine (verse 45)
9. Tiruvāmpatī Kṛṣṇa shrine (verse 46, 47)
10. Kṣetrapāla (the deity guarding the temple) (verse 48)
11. Valiya Balipitham (altar for performing sacrifice) (verse 49)
12. Western gate
13. Maṇḍapa (erected hall)
14. Dipāśālā (light chamber)
15. Nālampalam (the structure surrounding the sanctum sanctorium)

The Śrīkōvil was in square shape. Within there is the Garbhagrha where the image of the deity is placed. In front of the Garbhagrha (sanctum sanctorium) is situated a maṇḍapa on a square plan and built with pyramidal roof. Surrounding this there was a corridor known as Dīpaśālā. The entrance to the Nālampalam is through the eastern portion where the Balipiṭham is situated.

_Uṇṇunili's Nālukeṭṭu_

The house of Uṇṇunili consisted of four rooms joined together in a rectangular form with a yard in the centre inside. These structures are called Nālukeṭṭu though that word is not attested in the messenger poem. The basement and foundation of this house seems to be built of laterite and the other portions such as the columns, caves, the gables, the overhanging roof were built of timber. This house faces the east. The entrance is constructed at quite a little distance which consists of a door in the centre and beautiful pathway. The anonymous poet also gives the scale of each wing (keṭṭu) which is found in strict conformity with the principle of Vāstuśāstra.

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North

East Entrance

← East Entrance
1, 3 Kilakkinni-east wing 40 kōl 16 aṅgulam circumference
13

4, 5 Tekkini-south wing 38 kōl 8 aṅgulam
6

7 Patiñārini-west wing 39 kōl 16 aṅgulam
8

9 Vaṭakkini-north wing 39 kōl 16 aṅgulam
10

11

12

North
Patippura gate house

pathway to
Nālukettu

West

South

1, 2, 3, 4, 5, 6-sōpānam-stepping stone to go up

height of the stepping stone—5 aṅgulam

width 3 cân (27 inches)

7, 8, 9 Patippura gate house with apartments

length 6 k öl

8 door width 1 kōl 14 aṅgulam

The unknown author of the Uṇṇunilisandēśam, well versed
in architecture, also gives the measurements of the
Nālukettu of Uṇṇunili in verse number 35, 36 of the second
part of the poem. In verses number 33 and 34 he gives the measurements of the pathway and the front gate with apartment. It really creates surprise when we see the skill of the poet in narrating the scale and measurements of a house in an attractive poetic rhythm. The half of the Tekkini of the Nālukettu was used as bed room and the remaining portion for receiving the relatives. Kilakkini was intended for accommodating the guests. Paṭīṇārṇini was used for keeping valuable goods and Vaṭakkinni for cooking and related family affairs. The house description found in the Uṇṇunilisandēsam is a clear proof to the architectural skill of the carpenters of Kerala in the construction field by taking into consideration the climate and building materials available.

Trees like Jack tree are best planted in the compound around the house. The distance between each of them must be double that of their height when they attain maximum growth. Coconut trees and arecanut trees are to be grown on the outer side of the compound, thus Uṇṇunīlī's house presented a fine picture with a large compound. Almost all agricultural products like coconuts, vegetables, medicinal herbs, etc. were available around the house. There was one pond and one well in the compound (verse 37, 41).

References

1. 1 aṅgulam -1¼ inch
28,- kōl.
1 cān - 9 inches
The kōls are of different measurement and show changes according to latitude. Generally the length of kōl at Kerala is calculated as 28 inches.
CLASSICAL KERALA ARCHITECTURE AND THE NOVEL STRUCTURE OF C.V. RAMANPILLAI WITH SPECIAL REFERENCE TO THE MĀRTĀṆḌĀVARMĀ

S.S. SREEKUMAR

The mārgī (classical) tradition of Kerala architecture is documented in the palm leaf manuscripts obtained from several places in the State. It clearly indicates the influence of Indian classical tradition in which the concept of Nalukettu is the actual form of Kerala architecture. As Koodiyattam is said to be the unique theatrical form of Sanskrit drama, Nalukettu is said to be the Kerala form of Indian classical architecture. Kerala model of classical architecture like Nalukettu, Ettukettu, Pathinaarukettu functioned in the society as a particular weapon to maintain the hierarchy of the society. There is particular function in each part of the Nalukettu. The entry of other people into the house is restricted. The four portions of the structure, Vadakkini (northern portion), Thekkini (southern portion), Kizhakkini (eastern portion) and Padinjatti (western portion) are meant for different purposes as for worship, bed, cook, dine and store. The verandah going through the four portions inside the structure allow all the inhabitants to mix with one another. The external verandahs of each four portions are meant to entertain different people like the noblemen in the front and the servants, washerwomen, barbers and the tenants in the side and back portions of a Nalukettu. There will be a Nadumuttam (quadrangle) in the midst of the structure. There will also be a Padippura (gatehouse) in front
of the structure which enables the inhabitants to restrict the entry of the then backward classes (Bhaskaranunni: 1984). Only the elite classes of the society like Namboothiris, members of royal families and lords possessed the right to build such structures and they alone could afford to build such grand structures. If we closely examine these structures we can notice that such a tradition existed by eliminating majority of the people of the society like the then backward classes.

In deep contrast with this classical tradition of architecture, there also existed a Deši (folk) tradition. The simplest form of it is a rectangular base and a coniferous roof. This is the wide accepted model throughout the state/country by the poor, marginal classes of the society. This is also the form of architecture adopted by the working class of the Kerala society through centuries. It is interesting to note that this form is also adopted for the structure of primitive worship places like Nada, Mandakam and Kottam of Southern Travancore, South Malabar and North Malabar regions respectively. In the famous poem Poothappattu, Edassery mentions “Parayante mandakam kandaanunni” (Unni saw the Mandakam of Paraya). In another poem Duravasthā, Kumaran Aasan clearly indicates that the little hut of Chaathon is ‘like a mushroom in the boundary of the field’. ‘That is not circular, conical or rectangular and there was not a glance of the technique of an architect’, Aasan comments.

Architecture of the Manusyalāyas (the habitat of human beings) is not only a mixture of building materials or the calculation of structures, it obviously reflects the mindset of its inhabitants, their material practices, cultural needs and their world view. This world view is only found to be seen in literature, which is the expression of the human soul as a whole.

Though Malayalam literature has a short history of eight hundred years, it reflects the concept of architecture in both classical and folk traditions. One of our master narrators,
C.V. Raman Pillai in the first novel of his historical trilogy on Travancore portrays the classical Kerala architecture. His silence on the life of the marginal classes as well as their living places is to be noted well. This paper intends to study how the concept of classical architecture shaped his literary content, plot and also the narrative style.

We already noted that the poets like Kumaran Aasan and Edassery Govindan Nair mentioned the existence of the Desi sampradāya (folk tradition) of Kerala architecture in their works. In C.V. Raman Pallai’s Martandavarmā, we can not only notice that it reflects the classical architecture of Kerala but also the determining factors which shaped the structure of the novel.

**Space and Time in the Novel**

Space and Time are the major components which determine the structure of novel. The characters in a novel are developed through the time in a given space. The continuity of incidents taking place in the given space evolving through the time gives a structure to the novel. One of our master narrators C.V. Raman Pillai influenced by the historical romance of Sir Walter Scott—‘Ivanhoe’, chose the new genre named novel for his aesthetic practice. While Chandumenon, another novelist of the same period portrays the contemporary society in his novels Indulekhā and Sāradā, the social novels of simple structure, C.V. Raman Pillai wrote about the past society in a sophisticated and stylized structure depicting exaggerated characters in a historical background.

**The concept of Vāstumandala**

In classical architecture there exists a concept of Vāstumandala. The earth in which we live is treated as the biggest Vāstumandalā (Architectural plane) and the continents, nations, states and the piece of land where we build houses are microforms of this Vāstumandala which are also treated as Vāstumandalas (Kanippayyor: 2000). In this sense the
princely state of Travancore is the basic Vāsthumaṇḍala of his historical trilogy along with Martandavarma. In this novel, Padmanabhapuram palace, Charotte palace, Kalliyan-kadu, Chempakasseri tharavadu, the house of Kudamon Pillai and the house of Mankoiikkal Kurup are the different architectural planes where the characters of C.V. Raman Pillai lived their lives.

Along with the trilogy, the Martandavarma shares some particular characteristics. The characters of these novels are historical characters in a fictitious mould. They are not life-like human beings. Not only his characters but also his plot, diction and background are complicated in nature. His criticism about the social circumstances came into being through his novels. A direct reading of his novels gives an impression that he tries to glorify the Dynasty of Travancore. The names of the novels were undoubtedly of the rulers of Travancore; Anizham Thirunal Marthandavarma and Rāmavarma. But they are not the central characters of the novel. Ananta-padmanabhan and Subhadrā are the leading characters of the novel that controls the story line of the respective novels. The complexity is the outcome of the complex life portrayed in his novels. The factors which made the novel Martandavarma a historical romance are the usage of complex Sanskrit influenced sentences, the way of expression which usually Kathakali follows and sure enough the descriptions of ancient and traditional architectural grandeur of Kerala especially of the aristocratic households like Nalukettu, Ettukettu, etc. In the Martandavarma, Ettuveettil Pillais, Ugraharipanchananan, Perinchakkottu Kunchumayitti Pillai and Kaaliyudayan Chandrakaran; though they played negative roles in the trilogy, they are at the heights of the novel. As K.C. Narayanan pointed out in his beautiful essay Malayalikalude Ratrikal (The nights of Malayalis), the importance given to the negative characters is a particular peculiarity of Kerala’s own theatre Kathakali. When the roles of gods and kings are enacted by minor artists the negative
roles are usually given to master artists like Kalamandalam Ramankutty Nair and Late Champakkulam Pachu Pillai and Vellinezhi Nanu Nair etc.

The art of Kathakali influenced C.V. Raman Pillai a lot. In his novel as Dr. K. Bhaskaran Nair observes, C.V. Raman Pillai used the *Bhāvatprakāśana sampradāya* of Kathakali. It tried to ‘rasoddipana’ with ‘bhathkaraṇa’. That means C.V. Raman Pillai used the style of expansion to generate the feelings of the readers. He incorporates literary allusions from not only the Itihāsapurāṇas, but also from Kerala literature and the literature of performing arts, including Kathakali. The Marthandavarmā is also an example of this rule.

*Kathakali and Nalukettu—C.V’s alienation techniques*

C.V. Raman Pillai wanted to estrange his characters from the petty present. He equates his characters with the characters of the Purāṇas. He uses similes and metaphors from the classical literature. Chandrakkaran began to walk and became “Chandrakkaran dasakandharan paadaradhathe aarohanam cheyithu” (*Chandrakkaran who was Rāvana ascended the chariot of his feet*). Russian formalist Victor Shklovsky states that the main technique in literature is unfamiliarisation. C.V. Raman Pillai through his grand style alienates the common man from his novels. It intends that the readers of the novel must be the noble men of the society of higher caste Hindus. In his novels there are only characters from the elite classes like Kings, lords, Brahmins and Nairs. The then depressed classes like Channan, Maravar and Parayar also enters the structure of the novel but they usually play minor roles in the novel.

In Kathakali no character can speak. It is an art form of silence. This technique is used for the alienation of the characters from the present. There are also other techniques like through mudrās and the peculiar āhāryābhinhaya with the characters of triguṇa i.e. Pacha, Kathi, Kari, Thaadi, Minukku representing the sattva, rajas, and tamas guṇas. The
semicircular crowns and the Chutti through particular colours especially green, black and red make the characters alien from the present. The huge Uduthukett, the grand skirt made up of pillows and sacs are also used for this purpose. Through these estrangement techniques the characters of Kathakali estrange themselves from the petty men and the women of the present. So majority of the marginalized people also alienate themselves from Kathakali, the classical art form. For their aesthetic appreciation they make their own folk art forms both related to culture and art. Theyyam, Padayani, Mudiyeettu are examples for the first and Porattu, Kakkarissi are for the rest.

The Martandavarmā obviously shows the description of architectural grandeur which makes the structure of the novel to alienate from the petty present. The narration of the Chempakasseri house which spread over two pages in the novel pictures the architectural glory of the past. This Vāstuśilpamandala surprises the ordinary reader and it brings the awareness of the glorified past.

In this arappura (bedroom) the main incidents of the novel takes place. This is the bedroom of Parvathyamma, the lover of Anantapadmanābhan, who is the heroine of the novel. Nalukettu, the native form of classical architecture is meant for the restricted entry of the depressed classes says P. Bhaskaranunni (Bhaskaranunni: 1984) in his book Kerala in the nineteenth century. In the Mārtandavarmā the Karanavar of the family cannot enter that room. As a Brahmin, Sundarayyan easily enters the room and tries to influence Karthyayaniamma, mother of Parvathyamma to persuade her to marry Sree Padmanabhan Thampi. Sanku Aasan who is the watchman of the armoury tries to question the entry of Sundarayya and he is prevented entry to the Northern block. One day Sree Padmanabhan Thampi stays at Chempakassery and try to molest the girl. With the help of Sanku, Aasan Ananthapadmanabhan enters this room and prevents him from the act.
The description of the architecture not only alienates the ordinary reader but also takes part in the mysterious incidents which determine the formal structure of the novel. This classical concept of architecture became the central nucleus of the art of the novel of C.V. Raman Pillai, 'Martandavarmā.

**Bibliography**

MANUSCRIPTS RELATED TO ARCHITECTURE IN
GOVERNMENT ORIENTAL MANUSCRIPTS
LIBRARY, CHENNAI

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The Government Oriental Manuscript Library and Research Centre (GOML and RC) Chennai is a unit under the State Department of Archaeology. It is a veritable treasure-house of ancient knowledge housing 50,180 palm-leaf manuscripts, 22,134 paper manuscripts and 26,556 rare printed books. Started in 1869, this library is the repository of rare manuscripts and books in various languages such as Tamil, Sanskrit, Telugu, Kannada, Marathi, Pali, Urdu, Arabic, Persian, Sinhalese, etc. covering subjects such as Mathematics, Astronomy, Siddha, Ayurveda, Unani, Veda, Ágama, Architecture, Music, Sculpture, Fine arts, History, Grammar, Literature and many others. Scholars from all over India and abroad visit the GOML to access these rare manuscripts and books. It is an excellent resource centre for doing research leading to Ph.D. The collections of Colonel Mackenzie (1754-1821), Dr. Leyden and Mr. C.P. Brown constitute the nucleus of the vast collection of manuscripts preserved in the Government Oriental Manuscripts Library, Madras, which consists of manuscripts of works in Literature, History, Philosophy and Science, written in South Indian and other Oriental Languages, and of Kaśivats and inscriptions found in many places belonging to different periods. This paper gives a comprehensive
account of manuscripts related to Architecture in GOML, which would kindle the interest of scholars and students who wish to pursue their research in the field of Architecture based on manuscripts.

1. *Aṃsumadbheda: Kāśyapiya No. 1302*

   Paper manuscript; size 13.25 × 8 inches, pages 522, lines 21 on a page; character. Grantha; Complete-1083 Paṭalas. A treatise laying down rules for the construction of dwelling houses, palaces, temples, storied mansions, etc. and of windows, doors, porches, gateways, towers connected therewith and for the making of images of gods especially of the various manifestations of God Śiva. The work is attributed to Kāśyapa who is said to have learnt this science from God Śiva. It deals with 86 subjects including: Gopuralakṣaṇam, Vinayakalakṣaṇam, Parivāravidhi, Nāsika-lakṣaṇam, Nagavādhividhi, Toranalakṣaṇam, Manopāgārum, Manḍapalakṣaṇam, Prākāralakṣaṇam, Sukāsamāna, Kalyānasundaralakṣaṇam, Ārdhanārīśvaralakṣaṇam, Gajamūrtilakṣaṇam, Pāṣupatāmūrtilakṣaṇam, Dakṣināmūrtilakṣaṇam etc. Copying is said to have been finished on Friday, the 30th day of the month of Citra in the year Taraṇa.

2. *Aṃsumadbheda: with Tamil meaning No 13033*

   Palm-leaf manuscript-size 27×2 inches; pages 126; lines 9 on a page; character Kanarese. Begins on folio 47a. The other works herein are the Mānasāra (with Telugu notes) 39a, *Mayamatavāstuśāstra* 1a. Breaks off in the 59th adhāya same as the above work and with meaning in Tamil.

3. *Mayamatavāstuśāstram with Tamil meaning No 13034*

   Paper: size-13×8 inches; pages 390-22; lines per page; chapter Grantha and Tamil. Begins on folio 1a. The other works herein is *Sīlasāstra* 196a. Contains adhāyas 1 to 36, 13 to 18, 24 and 23 with Tamil meaning. Rules for laying out and the planning of towns is given here and the work is attributed to sage Maya
4. *Mayamatavāstuśāstram with Telugu meaning No 13035*
   Pages 74 and 9 lines per page. Contains 1 to 32 adhyāyas; complete. Same work as above with Telugu meaning.

5. *Mayamatavāstuśāstram No 13036*
   Paper: size 12.5×9.5 inches-pages 5; 22 lines per page. Begins with folio 170a. Contains some portions towards the end of the third adhyāya as well as description of Sphaṭikaliṅga.

6. *Mayamatavāstuśāstram No 13037*
   Paper: size 11×8.5 inches; pages 6; 18 lines per page; character Telugu. Begins on folio 21380 the other work herein is *Mānasāra* 180 contains the third adhyāya complete and the 34th incomplete; but wants the beginning in the 33rd adhyāya. Same work as the above.

7. *Mayamatavāstuśāstram with Telugu meaning No 13038*
   Palm-leaf; size 14.5×1.25 inches; pages 94; 5 lines per page; chapter Telugu. Contains 12 adhyāyas complete; wants beginning in the first adhyāya. This work gives rules for the making of images, temples, etc. It is attributed to Maya. It is followed by meaning in Telugu by Gannanacharya.

8. *Mayamataśilpaśāstram with Telugu Tika No 13039*
   Palm-leaf; size-14.35×1.5 inches; pages 36; 5 lines per folio, character Telugu. Same as above work but breaks off in the fourth adhyāya.

9. *Mānavavāstulaksanam No 13040*
   Paper; size 8.75 × 5.5 inches; 5 pages; 8 lines per page, character Devanagari. Begins on folio 19a. The other work herein is *Santarādīpika*. Contains 9 stanzas only which deals with the selection of site and the surveying and plotting of a ground apparently for building purposes.
10. Mānasāra No 13041
   Paper; size 13.25×8 inches; pages 495; 18 lines per page, character Grantha. Contains adhyāyas 1 to 72; complete. An extensive treatise dealing with surveying and plotting of land for building purposes, with the planning of villages and towns, with the construction of houses and temples together with the ceremonial rites to be observed on such occasions and with the making of images of different deities, etc. The headings of the adhyāyas specially the first adhyāya indicate elaborately the subjects dealt within them.

11. Mānasāra No 13042
   Pages 330; lines 22 on a page. Same work as above. Begins in the course of the seventeenth adhyāya and contains to the end of the work. The names, the numbering and the arrangement of the adhyāyas as found in this manuscript are different from those found in the manuscript described under the previous number.

12. Mānasāra No 13043
   Pages 20; lines 6 on a page; Begins on folio 26a and contains the adhyāyas 37 to 40 but with the beginning in the thirty-seventh adhyāya and the end in the fortieth Adhyāya.

13. Mānasāra No 13044
   Pages 18; lines 9 on a page; contains the thirty-fourth adhyāya which lacks the beginning portion and the thirteenth adhyāya. Same work as above with Telugu meaning.

14. Mānasāra No 13045
   Pages 411; 18 lines on a page. Begins on folio 1a, incomplete. Same work as above

15. Śilpaśāstram: Agastyam No 13046
   Pages 9; 15 lines on a page. The portion contained in this
manuscript deals with the astrological points so far as they are considered pertinent to Architecture.

16. Śilpaśāstram: Agastyam No 13047
   Palm-leaf; size 10.75×1 inches; pages 24; lines 4 on a page; character Grantha. Same work as above and treats of āyādilakṣaṇam

17 Śilpaśāstram No 13048
   Pages 192; lines 22 on a page. A work on Śilpaśāstra containing details of the measurement etc. in connection with the making of the images especially if the various forms of Lord Śiva. The work is compiled from three works, viz. Amśumadbheda, Viśvakarmiya and Agastīyaśilpa

18. Śilpaśāstram No 13049
   Paper; size 9.5×7.5 inches; pages 218; lines 21 on a page; character Telugu. Same work as above.

19. Śilpaśāstram with Tamil notes No 13050
   Palm-leaf; size 14.5×1.25 inches; pages 132; lines 5 on a page; character Grantha and Tamil. A compilation from three original treatises on Śilpaśāstra. The portion taken from the Viśvakarmiyaśilpa deals with certain astrological aspects conducive to gain or loss to the person who begins the laying out of villages or the construction of a building etc. And the portion taken from the Agastīyaśilpa deals with the measurement of proportions in images and that taken from the Mayamataśilpa deals with the fixing of the various quarters and the laying of a plot of ground for building purposes.

20. Śilpaśāstram with Tamil meaning No 13051
   Pages 44, lines 22 on a page same work as above

21. Śilpaśāstram with Tamil meaning No 13052
   Paper; size 6.25×9.25 inches; pages 232; lines 21 on a page,
character Devanagari. Contains description of certain divine images and the mode of construction of shrines, temple towers etc.

22. Śīlpaśāstram with Tamil meaning No 13053
   Paper; size 11.75×8 inches; pages 153; lines 26 on a page; character Telugu- incomplete. Same work as above.

23. Śīlpaśāstram No 13054
   Palm-leaf; size 10.75×1.25 inches pages; 64 lines; 6 per page; character Telugu; similar to the work above.

24. Śīlpaśāstram No 13055
   Pages 26; lines 26 per page. Same work as above. Contains Berapramānalakṣana, incomplete. Said to have been copied from the manuscript belonging to a Kamsala of Rajahmundry.

25. Śīlpaśāstram No 13056
   Palm-leaf; size 15.75×1.50 inches; pages 109; lines 5 per page; character Grantha. Incomplete and much damaged. Contains treatise on Madhuchiṣṭalakṣaṇam.

26. Śīlpaśāstram (Viśvakarmīyam) with Telugu meaning. No 13057
   Palm-leaf; size 11×1.5 inches-pages 100; lines 6 per page; character Telugu. Deals with the construction of houses. The good and evil arising by commencing the construction in certain months are given in the opening stanzas. Name of the scribe Nitla Surappa. Date of copying Saturday the 5th day of the bright fortnight of the Asvija month in the year Jaya.

27. Śīlpaśaṅgrahaḥ with Telugu meaning No 13058
   Paper; size. 13.25×8 inches; pages 429; lines 25 per page: character Grantha. A compilation from various works on Śīlpa giving detailed rules for the construction of temples and for
making of images for worship.

28. Śilpaśaraḥ No 13059

Pages 76; lines 22 on a page. Incomplete. This work contains a series of Dhyānaślokas extracted from the Purāṇas etc. and they give a description of the several manifestations of various deities of the Hindu pantheon. The description is intended to guide the artist in the making of the images to be used for worship in temples etc.

29. Sanatkumāraravāstusāstram with Telugu meaning. No 13060

Pages 45; lines 22 per page. A treatise dealing with the construction of houses and the astrological and ceremonial rites connected with it. The work is attributed to Sanatkumāra who says that he has taken the essence of what is found in the works of Brahman, Indra, Yama, Bhārgava, Āṅgirasa, Gautama, Gārgya, Manu, Bhṛgu, Viśvakarṇa. etc.

30. Sanatkumāraravāstusāstram No 13061

Paper; size 11.25×7 inches; pages 29; lines 17 per page, character Devanagari. Begins on folio 317b the other works herein are Sanandopākhyanam, Surabhandesvaramu, Caturvedasaram, Panditaradhyacarita, Śiva Purāṇasucika. Incomplete.

31. Sanatkumāraravāstusāstram with Telugu meaning. No 13062

Palm-leaf; size 12.75×1.5 inches; pages 48; lines 7 per page; character Telugu; incomplete. Slightly different from above.

32. Sanatkumāraravāstusāstram with Telugu meaning. No 13063

Paper; size 12.25×7.75 inches; pages 27; lines 25 per page; character Telugu. Begins on folio 37b. The other works herein are Niranjanasatakamu, Dattatreyasatakamu, Sadanandayagisatakamu, Yogataravali, Saivastutipadyamulu, Artaraksamanyastakamu etc. incomplete.
33. Sanatkumāravāstuśāstram with Telugu meaning. No 13064
    Pages 54; lines 27 per page; similar to the above and incomplete.

34. Sanatkumāravāstuśāstram with Telugu meaning. No 13064
    Palm-leaf; size 17\times1.5 inches; pages 60; lines 5 per page;
    character Telugu. Similar to the above and incomplete.

35. Sanatkumāravāstuśāstram with Telugu meaning. No 13065
    Palm-leaf; size 15.75 \times 1.5 inches; pages 21; lines 7 per
    page; character Telugu. Begins on folio 55a. The other works
    herein are Jyotiṣa (Muhurtādiviṣaya), Varṣaganita and
    Jyotiṣaviṣaya.

36. Sanatkumāravāstuśāstram with Kannada meaning. No 13067
    Paper; size 8.5 \times 4 inches; pages 87; lines 11 per page;
    character Kannada. Same as above but with Kannada
    meaning.

37. Sanatkumāravāstuśāstram with Telugu meaning. No 13068
    Pages 55; lines 22 per page; Similar to the above and
    incomplete.

38. Aṅgulādīmānaniṁayah No R-911(b)
    Palm-leaf. Deals with a kind of measurement having an
    ‘aṅgula’ as its standard used in connection with construction
    of sacrificial altars.

39. Adhiṣṭhānalakṣaṇam with Telugu meaning (Śrībhāsyā
    Śrīṇivāsācārīya) No D-14303
    Pages 20; lines 6 per page; character Telugu. Incomplete.
    A treatise on Śilpaśāstra dealing with construction of temples.

40. Vāstupadanyāśavidhiḥ with Malayalam meaning. No-D-8771
    Palm-leaf; 89 folios with 5 lines on a page; incomplete.
    Deals with the laying out of a temple for the Jina image.
Similar work describing the same rules can be found in Manuscript No-8772

41. Vāstuvidyā with Malayalam meaning. No-R3385

42. Vāstuśāstravidhānam No-D13592
   Palm-leaf; pages 36; lines 6 per page; size 13.5×12 inches, character Telugu. Complete, begins on folio 90a. The other works herein are Salarāmalakshana (Telugu), Jyotiṣaviṣaya, Adhiśṭhānalakṣana (with Telugu meaning), Bṛhajjātaka (with teiugu meaning) contains 31 adhyāya which treats the proper time for construction of buildings, for the laying down of villages, etc. Name of the scribe-Peddaguruvaaya, son of Peddaraja of Velluri family, Karnam of Kottapalayam. Date of completion: Wednesday third day of the bright fortnight in the month of Śrāvaṇa of the year Vikarin.
प्राचीनभारते बहवः: पण्डितः वासुशास्रे ख्यातिमलमत। तदानीन्तनकलादेव वासुशास्रस्य नितम् प्राधान्यमसीत। किंतु भारतीयवासुशास्रस्य सर्वत्र सर्वकाले समानरीति: नासीत। आलयानां रूपकल्पनासु वैविध्यं दृष्टम्। एकादशशास्राचे विरचिते समाराज्ञमूर्त्तारे, तदरूप अन्यायां कृतिः च भारतविङ्गस्य कालावस्थाम् अनुसृत्य त्रयो विभागाः: सत्यं। जागलम्, अनूपम्, साधारणम् इति।

पुरातनभारते आयुर्वेदः, योगः ज्योतिषम्, वासुशास्रम्-इति चतवारि शास्त्राणि प्रधानात्या प्रचलितानि आसन्। ऐतेषा विकासः: मनुष्याः तत्तकालोचितम् आवश्यकतुम्भूतः। मान्योपयोगय वस्तुनां रूपकल्पनाः, निर्भूति च पुरुषृंखल प्रवृत्तं वेदशास्त्राय वासुविद्या। प्रपञ्चनियमावसारेण रूपीकृतस्य वस्तुना: प्रपञ्चस्य च तदात्यत्वत्वमेव वासुविद्या: मूलम्। प्रपञ्चस्य आलस्य च उभयोः: कथा- संन्युक्तवस्थाया कर्तव्यः। तथा तदात्यायानिनाम् आरोग्यम् सम्पत्, सत्तोः: च वर्धयेत इत्येव वासुविद्या उद्दिष्टते।

वासु: इति पदं विविधप्रकारेण निर्वर्णित पण्डितः। त्रयेवदमनुमूल्य 'वासु' इत्यस्य स्थलो वा आलयो वा अथवा उभयो वा अर्थः। पुराणेऽपि वासु: इति पदस्य 'वस्तिः प्राणिः: यत्र' इति अर्थः: उक्तः। सर्वप्राणिः वासु: इति पदस्य 'वस्तिः प्राणिः: यत्र' इति अर्थः: उक्तः। सर्वप्राणिः सर्वजीवानां च सत्तित्या वसनम् एव वासु: इति। मृतो वा जीवो वा जीविताम् आवासकोऽदेव वासु: इति प्रयम्यम्।

वासुशास्रस्यमूल्य व्रहणाः वा तत्व सूक्तमूलपरं विण्डाण्डाः वा व्यापृत आलम् एव वासुपुरुषः। वेदान्तमाते सर्वप्राणिः सूक्तमूलस्यशाश्विरादेव सूक्तरुपं प्रकट: कृता। स्थूलशास्रोऽदेव सूक्तमूलशास्रम् अदृः च भवति। जीविवस्तुताः:
भौतिकशारीर स्थूल प्राण: सृष्टिमय भवति। वास्तुपुरुष: सृष्टिमयार: भवति।
तत्त्व वास्तवल स्थूलमध्ये भवति। सामान्यजनासं बोधनां प्रवृत्तो
निगूःबेदान्तसहितयाय: लिपिपत्रिश्रम एव वास्तुपुरुषस्कृत्य: इत्यि वत्तुं
शक्तितः।

वास्तुशास्त्रम पञ्चविवधाय: सति। तत्त्वार्थं, स्कृत्य: नियमा:। प्रमाणानि,
आचारसं: च। तत्त्वाश्चारम-अहं ब्रह्माः स्वतं चिन्तया एव गृहिण्मयां
कर्मीयम्।

स्कृत्य: प्रपञ्चस्कृत्य: वास्तुपुरुषस्कृत्य: च।
नियमा: पादविन्यास: विर्धिनिषय: च प्रागाहम्।
प्रमाणानि स्थलविवधाय:। सीमात: गृहपर्वतं स्थलम्, निम्नान्तरस्थलविवधाय:। च।

समर्द्धाः सच्चारस्य पञ्चविवधायश शिलान्यासविवधः प्रतिपादितः।
शिलान्यासाय शिलाया: लक्षणम् गृहदोषविविधतान्तः।

शिलामायां विचक्षणं परीक्षितं। कुम्भ-अक्षस्व-धवल, छत्र-मुख्य-चाँदर-
तोरण-दुःखा-नागफल-उष्णस्य-पुष्य-स्वस्तिक-वेदिभवः। नन्दा: स चामरेन:
कुम्भपदमपनाशकरे प्राणत्रे: प्राकब्रो: भूवित: कर्मण: हिताः। दोषा: हस्वा:
अत्यधिषाम: आच्छाम: आधामा: अपरिक्षिता: दिढपूडा: सास्त्रेश्चरा:
सर्वकारा: अंगाहीना: दु:पक्वनिमित्या: कृणा: खण्ड: दोषभालवहा: नृणा
पशुबन्धारणा पदार्द्धा: स्वस्ति: वृढ्ये। क्रत्वयानु मृगविहाराना पारद्र: स्मृत्स्तु
वज्र्येत्।

शिला: चतुर्विधा: नन्दा, भद्रा, जया, पूर्णा-इति। ता: एव वाणिष्ठी,
कार्यां, भार्यां अगरसी इति च कथ्यन्ते। तत्र प्राणुरे देशस सत्रिभीश्याम
वास्तु: नेत्र्याङ्का सकुस्मां समां गोचरसमितां सुग-वकलणा सुसुधारी
वेदी प्रकाश्चेत्। आग्नेयादित: नन्दा शिला क्रमन: स्थापयेत्।
सप्तमोत्पत्तलपल: सर्वंशिविशिष्याङ्क: हेमरजसमूहस्य: ताम्रमयै: कुम्भः
अकालेलै: अव्यः: मत्रे: तमु: अधिषेच्येत्। तीर्थप्रस्वामयभोविष: सर्वकारकपुक्राः
सुप्रभिभिषे: सपुष्पाहमु: अन्नधेकं प्रयोज्येत्। जानां, यमुना,
रेवा, सरस्वती इत्यादि संभवं महान्दीजलं शस्त्रम। शुभतिर्थं तथा
अद्रिवनवेशान्त देवायतनजानि च अभिषेकार्थम् अम्पासि यथालाभमुपहरेत्।
अनेन मन्त्रेन च एतासाम् अभिषेकं समाचरेत्। हिरण्यवर्णः पावन्यः शुचयः
दुरितिचिदेः पुनःतु शाश्वतः श्रीमत्य आपः युक्ति मधुसुध्यतः ईति मन्त्रपूर्तेन
पवसा ततः शिलाम् स्थापितता स्थपति गम्भीरक्षेल माक्हल्यन् अनुलेपयेत्।
हिरदनपूर्णं सुमुखिना चचन्वकीयं पुष्पदामभिः धूपार्क्योपहारे सलाजे च
ढंच्छ-माः-अश्वादिधि तरसा एतां छादयेत्। पुकले चस्त्रुयमश: च इष्टकां
देवीं पुञ्जयेत्। निवेशायान्ते नायैत्या तदा अस्थितानु समसंख्यानु शुचिनूः
प्राप्तानु विप्रानु दक्षिणार्फळे अर्चयेत्। ओऽकारस्वितपुण्याहितविद्वदित्रिनिन्तनः
जनतिरोमाचः करतां तेष्यः नमस्क्रीयाम् कुर्यात्। वासोपये भूतेयं च
tत्तम् बलः निवेद्यां तासां चत्वरानामन्या उपशिला: पृथक्कृ कुर्यात्।
प्राकारस्वितकांता ज्ई तथा श्रीवस्तनलक्षणा। नन्दावर्ततै पूण्यायां भवेतै एकः
यथाक्रमम्। कोणेप्रागदशङ्खने नन्दावर्ततु ज्ञिने एतत्। धो: स्थापयेत्।
अन्या: क्रमेन
भद्राशः कोणेवन्येषु च ज्ञिषु। प्रतिद्वापनमता: च तासां चत्वरानामपि
चत्वर ऋषिभिः गोत्रा शाष्ट्रार्धवश्वदशर्माओऽनिन्तनाः। वैद्यन्त आदिवराहस्य
वेदयौङ्गमर्मिनित्रा वसिष्ठनिदिनी नन्दां प्राक् प्रतिद्वापयामन्याम्। सुपुष्टेन
सुदिवे सा त्वं नन्दे निवेशिताः।

'आयु: कार्यविद्वारं न्यियं चाप्यायमिहावह।
भद्रासि सर्वतोभद्रा भवे। भद्र बिधीयताम।।
कर्मश्य प्रियसुते। श्रीरस्तु गृहसमघनः।।
जये। विजयता स्वामीः गृहयायण्या महात्मनः।।
आच्छदर्क्ष यशोवश्च्च भूम्यामिह विरोहतु।
तवः सम्पूर्णचन्द्रभः न्यस्ताया वास्तुनस्थले।।
भवत्येष गृहयायण्या पूण्। पूर्णमनोरथः।।

इति स्वस्तिकवाचने: मन्त्रे: मूलायं कुर्यात्। ताभि: हिरण्यवर्णाभि:
शिलाभि: सममतुहुभुम:। प्रागुर्धक्पलना ध्वन्यान्त प्रतयेक्षक्षायंतव।।
इत्यत्र चैत्यभवनप्रकारपुरकर्मस्य विलि चिनितिविवर्तो समुन्यक्ष्वनिचते पुरोधा
शान्तिवेदीशु प्रतिमास्त्रानेषु च। याविज्ञकः विध्यन्ते क्रमशः: स्थापयेचित्ता:।।
त्रैशृषोकणास्थास्ति: सामाभि: स महाभारते: गायत्र्यविषययमुपूर्विवधह्यात्।।
यहुत चयान्त समस्थारित्चनुत्या चतुर्न तिरमेतु। तत: निषेठुः चन्दुष्टयं ्भित्त्रप्रमाणं 
स्थुत्त्वं ज्ञात्त्वा आदिकर्मणं समाप्यम्। यथोत्तरं च कनिष्ठ प्रथम भूतले प्रतिष्ठिता: 
सुस्थिताः: समा: न चालयेत्। चालने गृहभूतुः महद्दू भयं स्यात्। ततासां स्थिरतां 
स्थपते: गृहभूतुः च परम महद्दूः विदु:। प्राणदक्षिणाय चालने गृहभूतुः महद्दू 
भयम्। नैर्जल्या चालने गृहभूतुः भायाविनाशा: मरुद्रिशि भीति:। ऐशान्यां 
गुरो: च भयम्। प्रथम स्थापितेनैव संभानिप न चालयेत्। नोद्वरत प्राणुधार्ण 
विधि: तत्त्व: तत्त्वनयोः। तस्मात् सम्बु समाहिता: शिलानां संभानां च 
स्थपति: स्वर्त्ता द्वारप्राकारशालानां नगरणां वेश्मनां च निर्माणां कर्यात्। 

अधुनापि गृहादिनिर्माणे गृहभूताः स्वस्थ्वमौख्यीत्त्व देवतापूजा च करोति। 
कर्मणो निविधनपरिसमाप्ति: देवताप्रसादेन भवति इति विश्वासः। कालभेदन 
रीतिभेदोद्विषेत कर्मसु। परंतु तत्वतो नास्ति भेदः।
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