



Shree Arunachaleswarar Temple RajaGopuram - Thiruvannamalai

Part 1



Shri. V S Jayabal

UNESCO + ASI + AGAMA + ENGINEERING

Scope of this manual

This part explains the roles of

1. UNESCO / ICOMOS views

In the year 2017, the Honourable High Court of Madras requested UNESCO, India to inspect the renovation works going on in some of the key temples in Tamilnadu and to submit its report for review.

2. Archaeological Department's views

Archaeological department's views are also sought time and again in renovations of the Temples for their views too and their opinion.

3. Agamam & Sirpa Sastram

4. Engineering views

The role of civil, mechanical and the electrical engineering are explained.



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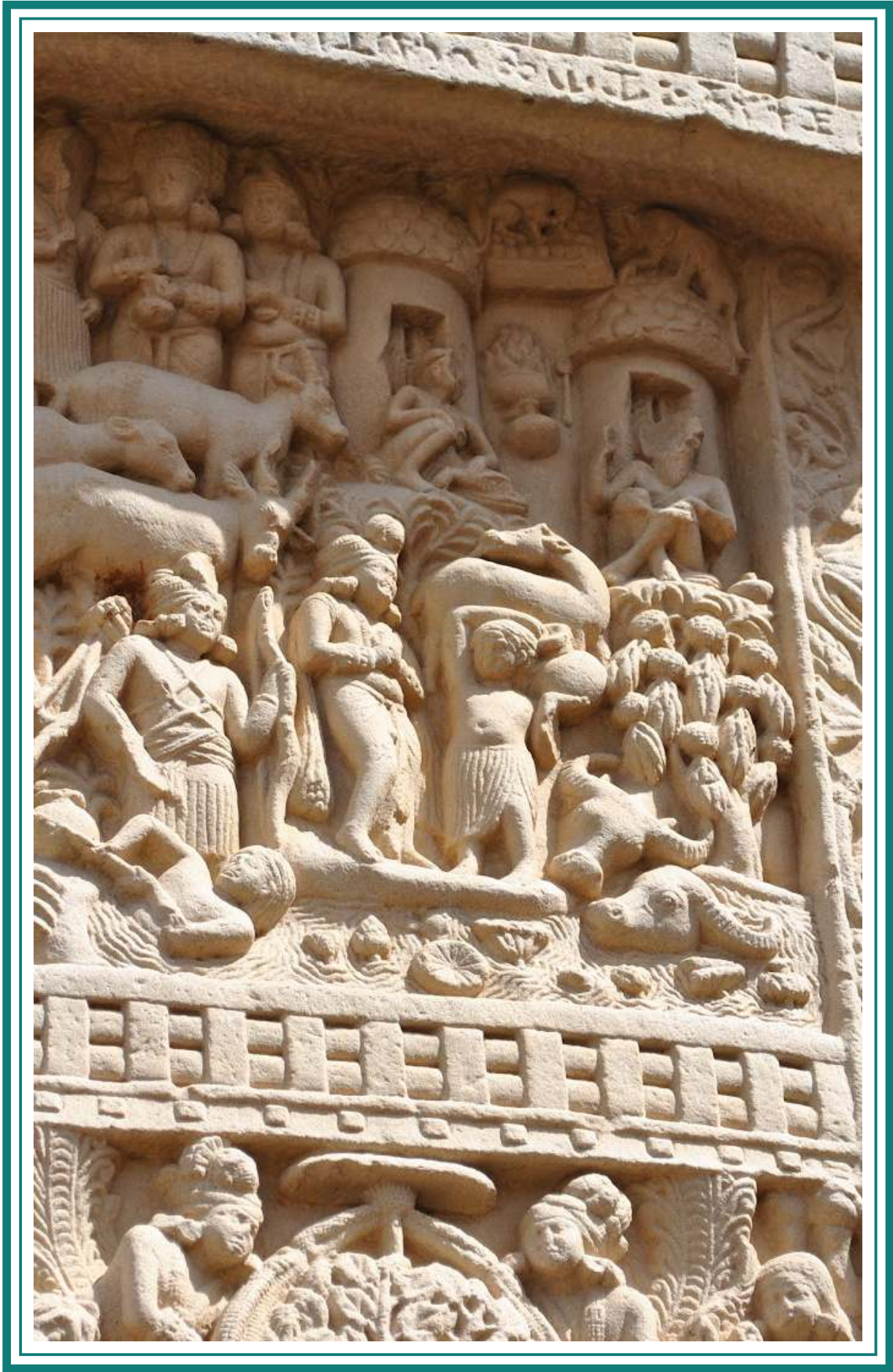
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Shree Pundarikatcha Perumal Temple - Thiruvellarai
The newly installed Door frame, RajaGopuram Entrance

1.1 UNESCO / ICOMOS Review

1.1.1 ICOMOS - The Venice Charter 1964



INTERNATIONAL CHARTER FOR THE CONSERVATION AND RESTORATION OF MONUMENTS AND SITES (THE VENICE CHARTER 1964)

*11th International Congress of Architects and Technicians of
Historic Monuments, Venice, 1964.*

Adopted by ICOMOS in 1965.

Imbued with a message from the past, the historic monuments of generations of people remain to the present day as living witnesses of their age-old traditions. People are becoming more and more conscious of the unity of human values and regard ancient monuments as a common heritage. The common responsibility to safeguard them for future generations is recognized. It is our duty to hand them on in the full richness of their authenticity.

It is essential that the principles guiding the preservation and restoration of ancient buildings should be agreed and be laid down on an International basis, with each country being responsible for applying the plan within the framework of its own culture and traditions.

By defining these basic principles for the first time, the

Athens Charter of 1931 contributed towards the development of an extensive international movement which has assumed concrete form in national documents, in the work of **ICOM** and **UNESCO** and in the establishment by the latter of the International Centre for the Study of the Preservation and the Restoration of Cultural Property. Increasing awareness and critical study have been brought to bear on problems which have continually become more complex and varied; now the time has come to examine the Charter afresh in order to make a thorough study of the principles involved and to enlarge its scope in a new document.

Accordingly, the IInd International Congress of Architects and Technicians of Historic Monuments, which met in Venice from May 25th to 31st 1964, approved the following text:

DEFINITIONS:

Article 1 to 16 explains the details of the various Restoration and Conservation practices to be followed.

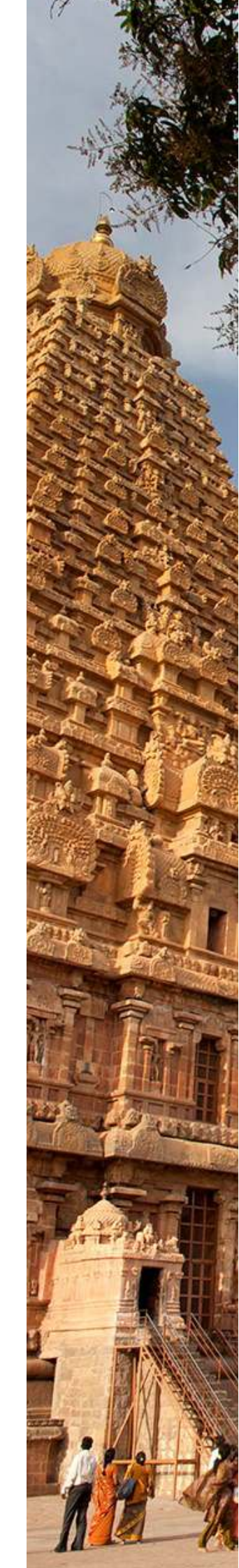
The Burra Charter - Australia ICOMOS - Nov 1999

(The Australia **ICOMOS** Charter for Places of Cultural Significance)

reviewed these Articles 1 to 16 over the period and drafted the revised / ammended Articles 1 to 34 in 26 November 2019

Preamble

Considering the International Charter for the Conservation



and Restoration of Monuments and Sites (Venice 1964), and the Resolutions of the 5th General Assembly of the **International Council on Monuments and Sites (ICOMOS)** (Moscow 1978), the Burra Charter was adopted by Australia **ICOMOS** (the Australian National Committee of **ICOMOS**) on 19 August 1979 at Burra, South Australia. Revisions were adopted on 23 February 1981, 23 April 1988 and 26 November 1999.

The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places), and is based on the knowledge and experience of Australia **ICOMOS** members.

Conservation is an integral part of the management of places of cultural significance and is an ongoing responsibility.

Who is the Charter for?

The Charter sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians.

Using the Charter

The Charter should be read as a whole. Many articles are interdependent. Articles in the Conservation Principles section are often further developed in the Conservation Processes and Conservation Practice sections. Headings have been included for ease of reading but do not form part of the Charter.

The Charter is self-contained, but aspects of its use and application are further explained in the following Australia ICOMOS documents:

- Guidelines to the Burra Charter: Cultural Significance;
- Guidelines to the Burra Charter: Conservation Policy;
- Guidelines to the Burra Charter: Procedures for Undertaking Studies and Reports;
- Code on the Ethics of Coexistence in Conserving Significant Places.

What places does the Charter apply to?

The Charter can be applied to all types of places of cultural significance including natural, indigenous and historic places with cultural values.

The standards of other organisations may also be relevant. These include the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places.

Why conserve?

Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records, that are important as tangible expressions of Australian identity and experience. Places of cultural



significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious.

These places of cultural significance must be conserved for present and future generations.

The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.

This is explained in 34 articles in detail.

Article 22

22.1 New work such as additions to the place may be acceptable where it does not distort or obscure the cultural significance of the place, or detract from its interpretation and appreciation.

22.2 New work should be readily identifiable as such.

1.1.2 The BURRA Charter

THE BURRA CHARTER

The Australia ICOMOS Charter for
Places of Cultural Significance 2013

Following a review this version was adopted by Australia ICOMOS in October 2013.

The review process included replacement of the 1988 Guidelines to the Burra Charter with Practice Notes which are available at: australia.icomos.org

Australia ICOMOS documents are periodically reviewed and we welcome any comments.

This Burra Charter 2013 also approves all the 34 articles.



Article 22 New Work

22.1 New work such as additions or other changes to the place may be acceptable where it respects and does not distort or obscure the cultural significance of the place, or detract from its interpretation and appreciation.

22.2 New work should be readily identifiable as such, but must respect and have minimal impact on the cultural significance of the place.



**APPROACHES TO THE CONSERVATION OF
TWENTIETH-CENTURY CULTURAL
HERITAGE
MADRID – NEW DELHI DOCUMENT
2017**

ICOMOS
international council on monuments and sites

INTERNATIONAL COMMITTEE ON TWENTIETH CENTURY HERITAGE

AIM OF THE DOCUMENT

The obligation to conserve and manage the heritage places and sites of the twentieth century is as important as our duty to conserve the significant cultural heritage of previous eras.

The cultural heritage of the twentieth century is at risk from a lack of appreciation and care. Much has already been lost and more is in danger. It is a living, evolving heritage and it is essential to understand, conserve, interpret and manage it well for future generations.

This document is intended for use by all those involved in heritage conservation and management processes that may impact



twentieth - century heritage places and sites.

Explanatory notes are incorporated where necessary and a glossary of terms completes the document.

This document contains Articles 1 to 11.

Article 7: Ensure a respectful approach to additions and interventions.

7.1 Additions need to respect the cultural significance of the heritage place or site.

In some cases, an intervention (such as a new addition to a building or garden, a new infill building in an urban area and so on) may be needed to ensure the sustainability of the place or site. After careful analysis, new additions should be designed to respect the scale, siting, composition, proportion, structure, landscape, materials, texture and colour of the place or site. Additions should be discernible as new, identifiable upon close inspection, but work in harmony

with the existing; complementing not competing, interpreting not imitating.

7.2 New interventions should be designed to take into account the existing character, scale, form, siting, landscape, materials, colour, patina and detailing.

Careful analysis of previous plantings, buildings and sympathetic interpretation of their design may assist in providing appropriate design solutions. However, designing in context does not mean imitation.

9.2: Respect the value of significant layers of change and the patina of age.

The cultural significance of a place or site as historic testimony is principally based on its original or significant material attributes and/or its intangible values, which define its authenticity. However, the cultural significance of an original heritage place or site, or later interventions, additions, landscape elements or new elements,



does not depend on their age alone. Later changes that have acquired their own cultural significance should be recognised and respected when making conservation or development decisions.

- 11.4: Encourage and support professional educational programs to build capacity and skills for twentieth - century heritage conservation.

Educational and professional training programs in many disciplines need to include the principles of conservation for twentieth - century heritage and address its specific challenges including understanding significance, technical and material challenges and ensuring environmental sustainability.



1.1.4 UNESCO India Report

UNESCO India in its report

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Distribution limited

RP/CONSULTANT

india

the renovation
and conservation of temples
in south india
with particular reference
to the temple of sri ranganathaswami,
srirangam, madras

October 1966

by Patrick A. Faulkner

WS/0367.99-ADG/SHC
Paris, March 1967

unesco

This is a good report explaining factors governing the principles of conservation

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Trivikrama
Durga
Krishna as Parthasarathi.

They may be photographed.

SOUTHERN SIDE GOPURAMS

Rayar Gopuram (Mottai Gopuram):

The Gopuram was started by Achyutadevarayar to signify his victory over the Chera King, but was not completed as the King did not live to see the completion of the work. As a matter of fact the same was to be the case with some other gopurams in South India that his brother, Krishna Devaraya, started. This gopuram bears the same colossal characteristics as those of Krishna Devarayar. It became a sort of convention in South India to call such unfinished gopurams as Rajagopuram, after the names of these illustrious brothers. The superstructure which does not exist here was clearly meant to be completed. As such today, we will be only discharging a sacred duty by completing the Gopuram. One such method of completing it in Raya's design is to put up the superstructure in one storey at least, as we do not know the exact number designed by the originators. This storey will be of brickwork, and will present on the façade a correct representation of the God of the place, Ranganatha, in stucco work painted in classical style.

Subsequently, the construction of this southern side Mottai Gopuram began in late 1970's and built to its final Grandeur of 13 storeys and 270 feet high.

The Samprokshanam of this SriRangam Shri Ranganatha Swamy Temple RajaGopuram was performed in 1981. Today this is the tallest RajaGopuram in South Asia and became very popular with the Devotees all over the world and the visiting tourist.

In exactly the similar context the donors have undertaken to complete the incomplete Mottai Gopuram at **Shree Pundarikatcha Perumal Temple, Thiruvellarai** from its present height of 60 feet / two tiers to 120 feet / seven tiers to its full Grandeur. In this particular RajaGopuram two tiers were already constructed and the analysis / extension of the existing structure by the Sthapathies and Archaeologist suggest that this was meant to be built to seven tiers / 120 feet height.

The construction began in May 2014 and continuing. Therefore, we see no reason why this incomplete RajaGopuram should not be completed to the full Gopuram. When fully executed, this temple will also become very popular and improve the livelihood of the nearby villages. This RajaGopuram with Hoysala Architecture, with high intricacies will become a landmark RajaGopuram in India.

1.1.5 UNESCO India visit to Shree Pundarikatcha Perumal

Temple, Thiruvellarai

UNESCO India visited the temple under the advise of the Honourable High Court of Madras as a fact finding mission to submit a report about the conservation work in progress during May 2017.

After elaborate discussions and after reviewing the interim reports / documentation, **UNESCO** India has agreed that this existing 800 years old structure is capable of accepting further construction, making the total height to 120 feet.

The **RajaGopuram** will attain its full grandeur when completed.

UNESCO India was not clear regarding the Agama rules and they had an apprehension whether the Agama rules will permit the completion of this RajaGopuram coming up on the northern side, inspite of the fact that we had produced a report from multiple Agama experts quoting the different verses in the Agamas to the effect that the RajaGopuram can come up in all the four directions independent of the direction faced by the Deity in the sanctum sanctorum. They have also a living example from different temples in Tamilnadu.

However, they were planning to conduct a Agama workshop



in Madras to get the opinion. **Accordingly UNESCO did conduct a Agama workshop in November 2017 in Madras, our Thiruppani team also participated and delivered a lecture on these Agama rules.**

Till date we have not received the supplementary report on this Agama workshop. In spite of our writing an E-mail to **UNESCO** India, till date, August 2020, we have not received the report. We would like to have the report from **UNESCO** India as soon as possible.

Our findings / omissions in UNESCO India report

With a deep sense of regret we would like to point out that **UNESCO** India has failed to take into consideration on the recommendations made by **ICOMOS** from different member countries.

1. The BURRA Chapter -Australia - November 1999.
Additional articles 22 - 22.1 & 22.2 introduced and recommended for new additions / conceptions.
2. The BURRA Chapter - Australia - October 2013.
Confirms and adopts articles 22 - 22.1 & 22.2 - new additions.
3. **ICOMOS** - Madrid NewDelhi Document
Articles 7 : Ensure a respectful approach to additions and interventions.
7.1 - Additions need to respect the cultural significance of the heritage place or site.

7.2 - New interventions should be designed to take into account the existing, character, scale, form, sitting, landscape, materials, colour, patina and detailing.

Article 9 - Respect the authenticity and integrity of the place or site

9.1 - Interventions should enhance and sustain cultural significance.

9.2 - Respect the value of significant layers of change and the patina of age.

11.4 - Encourage and support professional educational programs to build capacity and skills for twentieth - century heritage conservation.

4. **UNESCO** report - October 1966 by Patrick A. Faulkner.

This report clearly mentions

Quote

Rayar Gopuram (Mottai Gopuram):

The superstructure which does not exist here was clearly meant to be completed. As such today, we will be only discharging a sacred duty by completing the Gopuram.”

Unquote

We failed to understand the reasons for **UNESCO** India overlooking these points and mentioned in the report that it is not recommended to construct the RajaGopuram in the Northern

direction. It is also mentioned that the Mottai Gopuram is not recommended to complete it to its full grandeur.

Inspite of the fact that we personally gave a report containing the Agama sastras and pramanams to the effect that the RajaGopuram can come up at the Northern direction is also ignored by UNESCO India.

Such kind of reports and documentations does not speak high about the highly respectable UNESCO India Organisation.

To unearth all these details, I have become a member in **International Council on Monuments and Sites - ICOMOS** - based out of Paris and having operations in about 80 countries all over the world, in January 2020. Because of the current pandemic situations, I am unable to personally contact **UNESCO India, NewDelhi**, to represent our grievances personally.



1.1.6 Conclusion

Specific example:

The incomplete Rajagopuram at **Shree Pundarikatcha Perumal Temple, Thiruvellarai.**

The construction of this Rajagopuram began in 13th century and abandoned in 14th century in its present condition, possibly due to multi various reasons like invasions. The original intention could have been to built a seven tier RajaGopuram to height of 120 feet ; but as said above the RajaGopuram stands now to 60 feet height / two tiers.

At this juncture, we have taken up to complete this RajaGopuram to its full and final grandeur in 2014 . The emergency works have been executed between 2015 and 2019 as per the Honourable High Court Orders. The work is now held up due to the Honourable High Courts order.



As explained in the report, The UNESCO / ICOMOS recommends to add a new structure on top of this two tire RajaGopuram.

We also would like to point out the UNESCO / ICOMOS is open to the suggestions from its member countries, so that they can bring amendments to the existing articles as and when the necessity arises. Any suggestions from the member countries must enhance the social / religious values and importance for different faiths in different countries.

Bibliography

- *International charter for the conservation and restoration of monuments and sites (the venice charter 1964)*
- *The renovation and conservation of temples in south india with particular reference to the temple of sri ranganathaswami, srirangam, madras - October 1966 - By Patrick A. Faulkner - Paris, March 1967 UNESCO*
- *The Burra Charter - The Australia ICOMOS Charter for Places of Cultural Significance 1999*
- *The Burra Charter - The Australia ICOMOS Charter for Places of Cultural Significance 2013*
- *Approaches to the conservation of Twentieth - Century Cultural heritage madrid – New Delhi document 2017*
- *Conservation Manual 1923 - A handbook for the use of Archaeological Officers and others entrusted with the care of ancient monuments*

1.2 Archaeological Department's View

1.2.1 Conservation Manual - 1923

To the best of our knowledge the first Conservation Manual was published under the Authority of Government of India in 1923, authored

BY
SIR JOHN MARSHALL, KT., C.I.E., Litt. D., F.S.A.,
Director General of Archaeology in India

This manual defines various types of monuments.

In page no. 7, point 21 (c)

Archæological Officers must be careful not to put forward any proposals which are not strictly in accord with the provisions of the Ancient Monuments Act, or which might offend the religious susceptibilities of the individuals or communities to whom an ancient monument belongs. (See paras. 27 and 29.)

In page no. 9, point 24

24. As regards the selection of monuments for SELECTION OF conservation, it is difficult, if not impossible, to lay MONUMENTS. down any comprehensive principles which can be applied to each and every case. First, there are the



In page no. 10, point 26

LIVING MONU-
MENTS.

26. In the case of "living" monuments (by which is meant those monuments which are still in use for the purpose for which they were originally designed) it is sometimes necessary to restore them to a greater extent than would be desirable on purely archaeological grounds. In every such case the Archæological Officer

In page no. 11, point 28

28. It should be borne in mind by Archæological Officers that, even if the owners or trustees of a religious monument are willing to enter into an agreement under section 5(1) of the Ancient Monuments Preservation Act, it is open to them to terminate the agreement at their own discretion after due notice has been given. It is possible, therefore, that Government

In page no. 24, point 77

BRICKWORK.

77. No modern bricks whatsoever are to be used on any old building without the express permission of the Archæological Superintendent.

In page no. 48, point 171

LIME.

171. Each consignment of lime should be examined and tested as it arrives, and any defects in quality should be immediately reported. The lime is to be thoroughly screened to get rid of any dangerous or refractory lumps.

In page no. 48, point 173

173. Stone-lime mortar does not set unless it is mixed with sand, *surkhi* (pounded bricks) or cinders, in a proportion to be fixed according to the quality of the lime. The usual proportion is 1 : 2 measured dry. For quality of sand, *surkhi* and cinders see paras.

In page no. 50, point 181

in conservation works. A practical and quick way of testing lime mortar on the work itself is to take a handful of mortar from the trough and, after a minute or two, to wash it off the hand ; if the skin is left rough after washing, the mortar may be considered fit for use.

In page no. 50, point 182

LIMEWASH.

182. The use of limewash or paint is strictly forbidden except under written instructions from the Archæological Superintendent. Where the face of stonework

In page no. 52 & 53, point 189

MARKING OF STONES.

189. When dismantling masonry, previous to rebuilding, it may be necessary to mark or number the old stones, so as the more readily to replace them in their original positions. In doing this care should be taken not to incise the numbers or to apply to the exposed surfaces of the stones any oil paint or other pigment or stain which will be difficult to remove again.

The simplest plan is to number the stones on their faces with chalk and photograph them before dismantling. After dismantling, the stones should be renumbered on the back (or on some other surface which will not show afterwards) in paint or other durable medium.



In page no. 71 & 72, point 270

270. On the other hand, no pains or expense should be spared in the preservation of any woodwork belonging to the mediæval or earlier ages, as specimens of this class of work are exceedingly rare and valuable, and one and all of them, whether they be complete structures, like the temples of the Chamba valley, or

WOODWORK—
concl'd.

doors, pillars and the like, built into some stone or brick edifice, ought to be highly prized and scrupulously cared for. The treatment of such woodwork, if it is to be successful, may be a difficult and technical matter, and the assistance of the Archæological Chemist should, as a rule, be invoked.

In page no. 72, point 271

271. For the preservation of teak wood, periodic applications of crude earth oil or boiled linseed oil are efficacious. For other kinds of wood "Solignum" is generally preferable.

In page no. 72, point 273

273. If woodwork is found to be infected with injurious insects, the pest may be destroyed by means of carbon disulphide or hydrocyanic acid, the wood being afterwards protected against further damage by the application of a suitable preservative.

[Home](#) [States](#) [Tamil Nadu](#)

Hindu Religious and Charitable department to have manual on conservation of temples

It is proposed to have multi-disciplinary committees comprising sthapatis, art historians, conservation architects, archaeologists, etc., who would be involved in the conservation exercises.



Published: 26th November 2018 02:06 AM | Last Updated: 26th November 2018 10:07 AM

| A+ A A-

By [T Muruganandham](#)

Express News Service

CHENNAI: The Hindu Religious and Charitable (HR & CE) department will soon have a full-fledged manual comprising of standardised procedures, processes and principles for the conservation of heritage temples across the State.

"The draft manual which has been circulated to experts, is being vetted based on the inputs and feedback received," HR and CE Commissioner TK Ramachandran said. Professor Arun Menon, Structural Engineering expert, IIT, Delhi; AMV Subramanian, archaeological expert; Dr T Sathyamoorthy, Conservation expert; traditional Stapathy K Dakshinamoorthy; Dr MV Narasimha Shilpacharya, expert in Agama related issues and many others offered suggestions to better the manual for conserving heritage temples.

These experts explained in detail, several aspects of conservation and restoration works relating to structure, archaeology, Vastu aspects by Sthapati, Agama aspects, architectural aspects, history and heritage aspects, administrative issues and procedures.

<https://www.newindianexpress.com/states/tamil-nadu/2018/nov/26/hindu-religious-and-charitable-department-to-have-manual-on-conservation-of-...>

As on date to the best of our knowledge and the discussions we had with the Commissioner - HR&CE Department on 7 February 2020, the Conservation manual still not available with the department, and he is not very sure about the status of the manual. Therefore, we have offered our services to draft the conservation manual, for which the Commissioner has readily agreed.

Hence the current draft Conservation manual, August 2020 is

now made available to the HR&CE Department to enable the conservation and renovation work to progress which other ways was kept pending as of now.

So we are sure now, there is a solution for this long pending issue.



All the above recommendations and many more are already prescribed in our Shirpa sastram, the Sthapathis performing these conservations / new additions are fully aware of and we are following these procedures and documented wherever is required.

However, in our project completing the incomplete RajaGopuram from its two tiers / 60 feet height to its full and final grandeur of seven tiers / 120 feet at Shree Pundarikatcha Perumal Temple, Thiruvellarai, we have received the permission from consultant Archaeologist Dr. R Kannan, I.A.S., Addl Chief Secy cum Archaeologist and Shri. K.T. Narasimhan – Consultant Archaeologist / Conservationist on 24 June 2015, based upon their joint inspection at the temple on 21 May 2015.



1.2.2 Lime - Mortar Preparation Practice

At Shree Pundarikatcha Perumal Temple, we have installed a lime-mortar grinding machine in-line with the traditional grinding process.

Lime - Mortar Development

Conventional way

In the traditional process the granite roller what is seen in the picture is driven by two bullocks traveling in a circular path, enabling the grinding of the lime and sand mixture with the addition of water.



Traditional method

In these modern times, we wanted to bring a little mechanization to replace the bulls by the introduction of the gearbox in the middle of the circle, with the granite rollers on either side to prepare the Lime-Mortar.

After the studies, we have found the different techniques

available. Here we have decided to pursue as per the good old technique of utilizing the bulls to traverse in the circular path to grind. During the design of this machine we have estimated that it may take about a minute for the bulls to complete one full circle. That is 1 rpm. Therefore, in consultation with the manufacturer Shri K Kandasamy, Sakthi Drives - Coimbatore, it was decided to design the suitable gearbox to reduce the speed from the regular 1440 rpm to 1 rpm with the suitable other parts. Here the introduction of the two grinding wheels diagonally opposite became mandatory to balance the system. By this process we get an added advantage that the grinding time can be reduced by 50%.

In the end it turned out to be the perfect traditional machine to carry out the job. This project was completed in Sep 2016.

Current Method



Traditional Lime-Mortar preparing arrangement in construction phase



Another view of the Lime-Mortar mixer



Dr. Arun Menon - IIT Consultant, Mr. V S Jayabal - Donor and Mr. Kumragurubaran - Sthapathi discussing a Lime-Mortar mixer arrangement

To confirm the quality of thus prepared **Lime-Mortar** model Gopurams were built in the fourth prakaram adjoining the Raja Gopuram. For this purpose we have chosen the **karnakudu** from the first (5' x 5' x 12' height), second and the third tier to the actual dimensions.



This was completed in Jan 2017. On the four sides of the karnakudu, we have plastered with the Lime-Mortar on two sides and left the two sides with the original brick structure. This will give an idea about the complications / intricacies of the structure to the common devotee. This can also be time tested.

Bricks

It was equally imperative to utilize the clay bricks possibly of the same existing dimensions for this purpose.



Picture of the bricks with measurements

The conventional bricks is about 3 inches thick. Therefore, the machines were modified to produce the bricks with 2 inches thickness, close to the existing bricks.

These bricks were specially produced in Coimbatore / Kerala to the dimensions shown and shipped to Thiruvellarai site.

All the above points explained explicitly the procedures our Thiruppani Committee have been following.

In continuation to that we have recommended in our Conservation manual to appoint a dedicated Archaeologist and his team will be given an orientation program by our Thiruppani

Committee, to supplement his knowledge in handling the religious living monuments and the safe up-keepment of Moorthies / Vigragams and the other concerned temple properties. He will also be trained in the procedures and documentation systems so that this will be living monuments specific.

Museum:

He and the team shall also be responsible for organizing the museum atleast in some of the major temples and the related historical documents. This museum will help the devotees to have an opportunity to know more about the temple history and the artifacts. Therefore by this process, the devotees / tourists visiting the Shrines can enrich their knowledge and understanding of our religious landscape.



1.2.3 Conclusion

1. This dedicated temple Archaeologist team will help resolve issues relating to the Archaeological arena
2. Training program will be organized at least once in a year basis so that he will be updated about the current trends.
3. Such interactions will help to resolve many of the legal issues

Bibliography

- *Conservation Manual - 1923 - A handbook for the use of Archaeological Officers and others entrusted with the care of ancient monuments by Sir: JOHN MARSHALL, KT, C.I.E., Litt. D., F.S.A., Director General of Archaeology in India*



1.3 Agamam & Sirpa Sastram

While UNESCO and its associated organizations / **ICOMOS (INTERNATIONAL COUNCIL FOR MONUMENTS & SITES)** came into being in the year 1946 and Archaeological Society of India came into being in early 1900's , **OUR AGAMAS & SIRPA SASTRAM** is here since many millenniums of years. The 1st manual for conservation and preservation was drafted and issued by ASI in the year 1923.

The location , design , Architecture , materials and how and to construct our Temples and the ways and means to be followed for Conservation, Preservation and Maintenance are systematically defined and explained in our **AGAMAS / SIRPA SASTRAM**.

Since these particulars were available only in manuscripts, (ஓலை சுவடிகள்) and taught through generations from the Almighty to Rishis to Rishis to Pandits to current day Sthapathis , the knowledge diluted over the period of time , the modern institutions came up in various AVTARS and the sanctity of the system and the knowledge treasure and the beliefs / faith were superseded / undermined , may not be right term but the way it's in today's dynamic world , predominantly materialistic .

The traditional cultural landscape and the religious landscape are slowly deteriorating / diminishing , perhaps we are going through the கலிகாலம், since close to 5000 years.

Sarasvati Mahal Library In Tanjore was started in 1900 's by or erstwhile Indian rulers , one of the main purposes was to regularise our culture and tradition and take it forward to the future generations.

Most of the manuscripts, which were available in ஓலைசுவடி were collected , systematically sorted out , classified and stored in the **Sarasvati Mahal Library In Tanjore** for future use and references.



Sarasvati Mahal Library In Tanjore

After independence, since 1947 TamilNadu government took wonderful initiatives and administrators realized the importance of this such a valuable treasure and took initiatives to translate , facilitate easily accessible form to the common man to enhance their knowledge of the Society / Educational Institutions and thus the process of **Conservation, Preservation And Maintenance** started in our traditional ways.

This is commendable , the society salutes their contributions to the modern world.

While in the process of a construction of **Shri Pundarikatcha Perumal Temple , Rajagopuram** , we were given an opportunity and visited the holy place and Temple of learning **Sarasvati Mahal Library In Tanjore** in 2019 and were pleasantly surprised to see this treasure of knowledge. Our family of Engineers and Doctors could



Palm Manuscripts in Sarasvati Mahal Library - Tanjore

very well realised and appreciated this herculean task and were immensely pleased for having gone there.

We were given an elaborate / technical tour of the library and learned / appreciated the commitments of the dedicated administrators capabilities. We regretted very much that we must have visited much earlier, but never too late.

We bought a good collection of the books. We were told some of them are still in process of drafting and some of the books are under printing.

1. காசியப சிற்பசாஸ்திரம்.
2. மயமதம்.
3. சிற்ப ரத்தனம்.
4. ஸ்ரீ ஸாரஸ்வதீய சித்ரகர்ம சாஸ்திரம்

These above books are good enough for our understanding and requirements.

Few of the details are given below.

DETAILS:

Therefore , these literatures will take us through our activities.

We personally have the opinion that our Governments and Educational Institutions, though they are doing lot of developments and improvements, more to be done to bring out qualified Sthapathies and take our tradition and culture worldwide.



Saraswathi Mahal Library

文A



Saraswathi Mahal Library, also called **Thanjavur Maharaja Serfojis Sarawswathi Mahal Library** is a [library](#) located in [Thanjavur](#) (Tanjore), [Tamil Nadu](#), [India](#). It is one of the oldest libraries in [Asia](#)^[1] established during 16th century by Nayakas of Thanjavur and has on display a rare collection of [Palm leaf manuscripts](#) and paper written in [Tamil](#) and [Sanskrit](#) and a few other [languages indigenous to India](#). The collection comprises well over 49,000 volumes, though only a tiny fraction of these are on display. The library has a complete catalog of holdings, which is being made available online. Some rare holdings can be viewed on site by prior arrangement.^[2]



Entrance of the Saraswathi Mahal Library, Tanjore, Tamil Nadu, India.

☰ Contents ▾

^ History



The Saraswathi Mahal library was started by Nayak Kings of Thanjavur as a Royal Library for the private intellectual enrichment of Kings and their family of Thanjavur (see [Nayaks of Tanjore](#)) who ruled from 1535 CE till 1676 CE.^[3] The [Maratha](#) rulers who captured Thanjavur in 1675 promoted local culture and further developed the Royal Palace Library until 1855. Most notable among the Maratha Kings was [Serfoji II](#) (1798–1832), who was an eminent scholar in many branches of learning and the arts. In his early age Sarfoji studied under the influence of the [German](#) Reverent Schwartz, and learned many languages including English, French, Italian and Latin. He enthusiastically took special interest in the enrichment of the Library, employing many [Pandits](#) to collect, buy and copy a vast number of works from all renowned Centres of Sanskrit learning in Northern India and other far-flung areas.

During 1918 the Saraswathi Mahal Library was open to public.^[4] The Library is located within the campus of Thanjavur palace.^[5]

^ Efforts





**Ruins of Sharadha Peeth in Kashmir
Shree Ramanujar along with Koorathalwar
around 1016 A.D visited this Shrine and wrote
Shree Bhashyam**

1.3.1 ஸ்ரீகாசியப சில்ப சாஸ்திரம்





வெளியீட்டாளர் முகவுரை

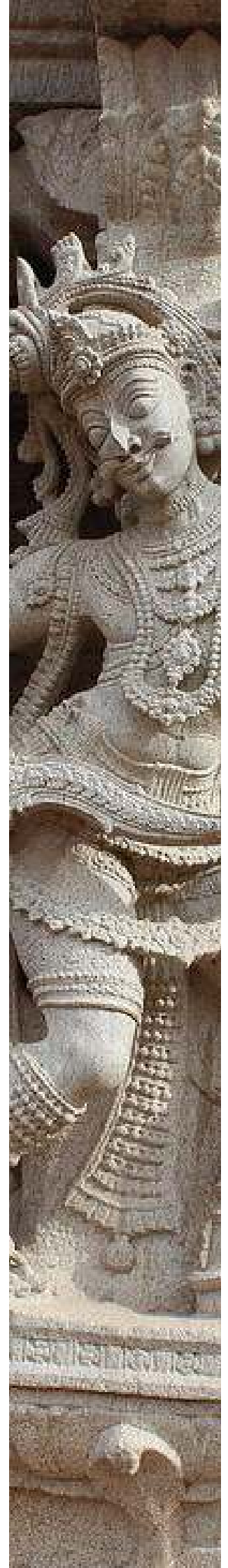
Chapter 27-41.

தமிழகத்தின் கலை மற்றும் பண்பாட்டிற்கு எடுத்துக்காட்டாக விளங்கும் தஞ்சைமாநகரத்தில் அமைந்து தரணி முழுமைக்கும் அறிவுச் செல்வமாகப் பயன்பட்டுக்கொண்டிருக்கும் அரும்பெரும் நிறுவனம் சரகவதி மகால் நூலகமாகும். இந்நூலகத்தை அணி செய்கின்ற அரிய சுவடிகளில் வெளிவராதவற்றை தேர்வுசெய்து மொழிப்பண்டிதர்கள், துறை வல்லுநர்கள் மற்றும் சிறப்புக்கேண்மைப் பதிப்பாசிரியர்களை நியமித்து அவர்களைக் கொண்டு நூல்களாக பதிப்பித்து வெளியிட்டு வருகின்றது. அவ்வரிசையில் ஸ்ரீகாசியப சில்ப சாஸ்திரம் - முதல் பாகம் என்னும் சிற்பநூல் தற்பொழுது மூன்றாம் பதிப்பாக வெளியிடப்படுகிறது.

வாஸ்து எனும் நமது பாரம்பரிய கட்டடக்கலை மற்றும் சிற்பக்கலை குறித்த மிகத்தொன்மையான நூல்கள் வரிசையில் தலையாய இடம் பெறுபவை மயநூல், ஸ்ரீகாசியப சில்ப சாஸ்திரம் போன்றவை யாகும். இந்நூல் கிராம அமைப்பு, நகர அமைப்பு, கோட்டைகள் அமைப்பு, இல்லங்கள் அமைப்பு, அரண்மனை அமைப்பு போன்றவை பற்றியும், கட்டட அமைப்புகள் பற்றியும், சிற்பங்கள் பற்றியும், அவைகள் அமைக்கப் படுவதற்குரிய அளவீடும், இலக்கணம் ஆகியவற்றைத் தெளிவுற உரைப்பதாகும். இந்நூல் கிரந்த மூலபாடத்துடன் தமிழ் மொழிபெயர்ப்புடன் வெளியிடப்படுகிறது. இந்நூலில் 45 படலங்கள் உள்ளன. பலருக்கும் பயன்படுமாறு

PREFACE

The Ancient Indian culture conceived of knowledge as one integrated whole and all branches of learning as complementary to one another and as contributory to the ultimate goal of that knowledge which lies in the realisation of God. As a consequence of this concept, each branch of knowledge has its higher or spiritual, and lower or secular aspect. Silpa Sastra is one of such branches of knowledge. The term '*Silpa*' in its more comprehensive connotation includes all practical arts and crafts involving creative fancy and dexterity of workmanship. In its confined and more commonly understood sense, *Silpa* includes Architecture (*Vastu Kala*) and sculpture (*Murti Kala*) as the main topics and painting and engraving as subsidiary to them. In its secular aspect, the Vastu part of Silpa Sastra deals with the construction of the abode of men, houses and palaces and the lay out of villages and towns, while, in its religious aspect, it deals with the construction of the abode of Gods, temples, halls of worship, domes and towers connected with them. In the *Murti Kala* part, Silpa Sastra sets forth at length the dimensions, description and details of statues and images of gods, goddesses and saints. Silpa Sastra is one of the greatest heritages which the seers and wisemen of the hoary past have bequeathed to us. It speaks of the aesthetic taste and glory of the ancient dynasties of the South, the Pallavas, Chalukyas, Cholas, Pandyas and Hoysalas, who gave



material expressions to the ideals enshrined in the Silpa Sastras.

A very large number of old and rare manuscripts of works in Silpa Sastra on palm leaf and paper are preserved in the Sarasvati Mahal Library, Thanjavur. The Government of Tamil Nad have come forward to bring to light some of these manuscripts and in G. O. Ms. No. 1621 Education dated 24-9-1957 the Government has authorised the T. M. S. S. M. Library, to bring out 14 selected works on this subject. The initiative in this matter was taken by Thiru T. K. Palaniappan, M. A., I. A. S., then Director of Industries in the Government of Madras. These publications are mainly intended for the use of the teachers and pupils of the schools of Sculpture and other training centres organized by the Government and so they were to be published with the original Sanskrit text in Grantha script and a translation into easy Tamil. Nine of these books have already been published giving priority to the iconographical part of the respective works.

The second part of the Kasyapa Silpa consisting of chapters 46-92 dealing with Iconography was published with Tamil translation in the year 1960. The portion deals with the characteristics and measurements of Saivaite icons, the forms of *lingas* the images of the attendant deities of Siva and Saivaite saints. It also deals with the materials to be used for these images, the preparation of colours, plasters and cements and the various standards of measurement called *Talamana*.

Part I is More Important
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The present publication is the first part of Kasyapa Silpa consisting of chapters 1-45 dealing with Sculpture. The first three chapters of this part lay down the rules for the selection of a proper site for the construction of a temple and the ceremonial rituals for the initial purification of the ground. The next three chapters prescribe the rules for laying the foundation, the selection of suitable kinds of stones and the lay out of the ground floor. A few following chapters deal with the construction of suitable outlets for the ablution water and the corresponding adjustment of levels, the varieties of simple and ornamental pillars, the erection of the required altars, daises and platforms. The several types of windows are described next. Chapters 12 to 15 prescribe the construction and measurement of several kinds of grand and ornamental arches and entrances and the decorative designs pertaining to them. Chapters 16 to 17 prescribe the location of several doorways and the auspicious rules for their fixture. Chapters 18 to 21 deal with the enclosure walls and the outer columns for the structure upto the roof and pinnacle. Chapters 22 onwards set forth the rules regarding the structure of the inner chamber the Sanctum Sanctorium, the adjacent columns and the enclosures. Chapters 27 to 41 comprises a very interesting portion giving a very detailed account of several types of towers, Gopura and Vimana ranging from a single flat to 16 flats with dimensions like height, width and the gradation of slope, the several images of deities and other figures and

Chap 42 : Details of the Capping Stone

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ornamental designs which must embellish every flat. The 42nd chapter is devoted to the details about the material and measurement of the capping stone block which is to be placed on the top of the tower. The 43rd chapter deals with the outer part of the temple, the rampart walls surrounding the temple and their embellishments. The last chapter defines the nature and varieties of the towers to be constructed over the main entrances and their various flats.

From this, it will be seen that the sculptural portion of the Kasyapa Silpa Sastra confines itself to temple structure; but other silpa works like Mayamata, Viswakarma Vastu Sastra and Manasara, include elaborate rules about construction of palaces, mansions and ordinary dwelling places, the types of town and villages and the allocation of various portions in it to the several classes of people and the general rules for their lay out.

It is hoped that a study of this and other similar publications on Silpa Sastra will not only be useful to the *Sthapathis* to acquaint themselves with the ancient art of construction, but also be helpful to the public to appreciate correctly the principle underlying the beauty of our ancient architectural achievements.

The present publication is based upon the manuscript of the T. M. S. S. M, Library bearing Burnell No. 11078 / D. No 15419 and the printed edition published by the Anandasrama Press, Poona.

உ
ஸ்ரீ கணபதி துணை.

முகவுரை

தனது தவப் பெருமையினால் அறிவின் கடலாக நின்று உலகைப் படைக்கும் ஆற்றல்பெற்ற மாமுனிவர்கள், மக்கள் யாவரும் மகிழ்ச்சியுடன் வாழக் கருதி, மனமுவந்து நகரம், தேவாலயம், கோபுரம், கிராமம், மண்டபங்கள், நதி, நீர்க் தேக்கங்கள் முதலிய வஸ்துக்களைக் கற்பிக்கும் முறைகளையும், அவைகளின் இலக்கணங்களையும் சிலப் நூல்களாக இயற்றி அருளியிருக்கின்றனர்.

இந்நூல்களை முறையுடன் கற்றுத் திறனும் ஆற்றலும் பெற்ற சிறந்த சிற்பிகள், வெண்காலத்திற்கு முன்பு நிறுவிய தேவாலயங்கள், கோபுரங்கள், தேவதாமர்த்திகள், நகரங்கள், கிராமங்கள் முதலியன தனதெழில் பெருக்கின் பெருமையினால், காண்போர் கண்ணையும் கருத்தையும் கவருகின்றவைகளாக இன்றும் காணப்படுகின்றன.

இத்தகைய பெருமைவாய்ந்த இந்நூல்கள், பயிலும் முறை குன்றிவந்தமையால், தக்க முறையில் காப்போரற்று, உருக்குலைந்து, சீரழிந்து, உண்மையான கருத்துக்களைப் புகட்டும் தன்மை குன்றிய நூல்வடிவத்திலேயே காணப்படுகின்றன.

தேவர் மக்கள்முதல் எறும்பு ஈருன ஸகல ஜீவராசிகளையும் படைத்தவர் காசியப முனிவர், என்று மாபெரும் புராணங்கள் கூறுகின்றன. அம்முனிவராலேயே இந்நூலியற்றப்பட்டிருப்பதால், இந்நூலானது, காசியப சிலபம் என்று காரணப் பெயருடையதாயிற்று. எனவே, இவ்வுலகத்தையே படைத்த முதல் மூலபுருஷனாகியற்றப்பட்ட இந்நூலானது, மிகப் பழமை வாய்ந்ததாகும்.

இந்நூலானது, தஞ்சை ஸ்ரீ ஸரஸ்வதி மஹால் நூல்நிலையத்தில் கையெழுத்துப் பிரதியாகவும், புன ஆனந்





வெளியீட்டாளர் முகவுரை

பன்மொழிச் சுவடிகளைத் தன்னகத்தே கொண்டு தனிச் சிறப்புடன் விளங்குவது தஞ்சாவூர் சரசுவதி மகால் நூலகம். பன்மொழி வளர்ச்சிக்கும் பதிப்பியல் மேம்பாட்டுக்கும் இந்நிறுவனத்தின் பங்களிப்பு, தனித்துக் குறிப்பிடத்தக்க நிலையில் அமைந்துள்ளது. சுவடிகளின் அடிப்படையில் இந்நூலகத்தால் பதிப்பிக்கப்பெறும் பல்துறை நூல்களும் பயனுறு படைப்புகளாக திகழ்ந்து வருகின்றன. அவ்வரிசையில் **மயமதம் - முதல் பாகம்** என்னும் இந்நூல் தற்பொழுது மூன்றாம் பதிப்பாக வெளிவருகிறது.

பழமையான சிற்ப நூல்களில் ஆறுவகையான மரபுகள் பழங்காலத்தில் காணப்படுகின்றன. அவற்றுள் விசுவகர்மாவின் வாஸ்து சாஸ்திரமும் மயனின் மயமதமும் பெருமை பெற்றுத் திகழ்வனவாகும். இவ்வகையில் போற்றத்தக்க சிற்ப நூலான மயமதம் என்னும் நூலானது தேவசிற்பியான மயன் என்னும் முனிவரால் இயற்றப்பட்டது என நூல்கள் உரைக்கின்றன. சரசுவதி மகால் நூலகத்தின் எண்கள். B.3654, D.154-35 ஆக சமஸ்கிருதத்தில் மயமதம் என்னும் சுவடி நூல் உள்ளது. இதன் 5,6 அத்தியாயங்கள் மட்டும் மகாராஷ்டிர உரையுடன் இருக்கின்றது. இந்நூலினை திருவனந்தபுரம் மகாராஜா நூல்நிலைய பிரதான பண்டிதர் **த.கணபதி சாஸ்திரிகள்** மயமதம் எனும் நூலினை பல பிரதிகள் மூலம் சீர்திருத்தம் செய்து வெளியிட்டுள்ளார்.

இந்நூலையும் சரசுவதி மகால் நூலக சுவடிகளையும் மூலமாக வைத்துக்கொண்டு **கே. எஸ். சுப்ரமண்ய சாஸ்திரிகள்** மூலபாடத்தைக் கிரந்தத்திலும், உரையைத் தமிழிலும் செய்து சிறப்பாகப் பதிப்பித்துள்ளார். இதில்

உ
ஸ்ரீ கணபதி துணை.

முகவுரை

தனது தவப்பெருமையினால் அறிவின் கடலெனத் திகழ்ந்து உலகைப்படைக்குமாற்றல் பெற்ற மாமுனிவர்கள், மக்கள் மகிழ்வுடன் வாழக் கருதி மனமுவந்து நகரம், கிராமம், தேவாலயம், கோபுரம், தேவதாமூர்த்தி விசேஷங்கள் முதலான ஸுகலவிதமான வஸ்துக்களையும் கல்பிப்பதற்கு இன்றியமையாத சிலப் நூல்களை இயற்றி அருளியிருக்கிறார்கள்.

இந்நூல்களைக் கற்றறிந்து திறனும் ஆற்றலும் பெற்ற சிற்பிகள் வெகுகாலத்திற்கு முன்பு நிறுவிய தேவாலயங்கள், கோபுரங்கள், நகரங்கள், தேவதாமூர்த்திகள் முதலியவைகள் தனது எழில் பெருக்கின் பெருமையினால் இன்றும் காண்போர் மனதைக் கவருகின்றன.

இத்தகைய பெருமைவாய்ந்த இந்நூல்கள், பயிலும் முறை குன்றிவந்தமையால் தக்க முறையில் கார்ப்போரற்று, உருக்குலைந்து, சீரழிந்து உண்மையான கருத்துக்களைப் புகட்டும் தன்மை குன்றி காணப்படுகின்றன.

பொன்னெனப் போற்றத்தக்க சிலப் நூல்களில் ஒன்றான “மயமதம்” என்னும் இந்நூலானது, தேவ சில்பியான மயனென்னும் முனிவராலியற்றப்பட்டது.

தஞ்சை ஸரஸ்வதி மஹால் நூல்நிலையத்தில் நெ. 3654 ஆக இருக்கும் இந்நூலில் ஆதியில் 5, 6 அத்தியாயங்கள் மட்டிலும் மஹாராஷ்டிர உரையுடனிருக்கிறது.

திருவனந்தபுரம் மஹாராஜா அவர்களின் நூல் நிலையத்தில் பிரதான பண்டிதராக இருந்துவந்த த. கணபதி

PREFACE

The most unique feature of the ancient Hindu civilization is that it conceived of knowledge as one integrated whole, of which all the various branches of learning are mutually complementary parts. While extolling spiritual learning as *Parā vidyā*, the supreme knowledge, the ancient Seers have also laid stress on the learning of material sciences, as *Aparā vidyā*, subsidiary knowledge, which is contributory to the greater wisdom. Under the comprehensive range of religion, they synthesized all aspects of learning and of life, the physical and the intellectual, the material and the spiritual, the mundane and the other-worldly. The works in *Silpa Śāstra*, which generally deal with the construction of houses and palaces, villages and towns in one half and with the erection and installation of temples and idols of deities in the other, afford an effective example of this integration of knowledge.

The *Silpa Śāstra* is one of the greatest legacies that we have inherited from our ancients. The multi-storeyed towers of temples which have anticipated the advent of sky-scrapers, the thousands of life-like icons and statues of elaborate and



intricate workmanship, the countless varieties of ornamental designs in wood, brick and mortar, and stone, the colossal granite structures raised to dizzy heights in days when mechanized methods of lifting were not even dreamt of and the huge arched roofs of dome-like shape of very spacious halls with not a pillar to support them, and such other great engineering achievements which every foreign tourist in India gazes at, admires and envies, are all the results of the practice of architecture and sculpture, expounded in the ancient works of *Silpa Śāstra*.

The word *Silpa*, in its wider connotation, comprehends all arts and crafts which require dexterity of hand, combined with concentration of mind and creative faculty. It includes architecture and sculpture, painting and engraving, smithy and carpentry and also all topics of constructive science coming under Mechanics and Engineering in modern parlance. In its more circumscribed sense the word denotes *Vāstu kalā*, the science of building and *Mūrti kalā*, iconography. The hoary origin of this science can be easily surmised from the innumerable references to *Silpa* and *Silpis* in *Purānas* and *Āgamas*.

Although six different schools of *Silpa* have been recognised in ancient works, two of them stand out as more prominent than the rest, namely the school of *Viśvakarma* and that of *Maya*, the former being considered as the architect of the Gods and the latter of the Asuras. *Viśvakarma Vāstu Śāstra*, a standard work of the former school has already been printed

and published by this Library and Mayamatam, the classic of the other school is now placed before the public.

Maya, who is considered to be the author of this treatise is spoken of with reverence as a sage, Mayamuni, and the epics describe him as one of the founders of *Silpa Śāstra*, as a worker of miracles in the art of building, and as one endowed with divine inspiration.

The first volume of *Mayamata*, which is now brought out deals with the lay-out and construction of villages, towns and temples, thus comprising topics pertaining to Architecture only. In the beginning, the author sets forth the right types of sites for buildings and the several standards of measurement beginning with the minutest unit, the *Paramāṅgu*. An elaborate description of the various types of villages first, and of towns next, their classification and modes of construction and the allocation of appropriate residential areas to the several categories of people, suitable to their avocations and their function in society are dealt with at considerable length. Plans of twelve different types of towns and seven different kinds of forts are given in this book, satisfying the civic as well as the defensive needs of the country. With regard to the buildings themselves, Mayamuni deals with every minute detail, beginning with the foundation and basement right upto the turret of the dome. He sets forth the measurements, the quality and the variety of the materials to be employed, and the precautions to be



taken to make the structure auspicious and long-standing.

After dealing with the abode of man, Maya deals with the abode of God. The selection of the suitable holy ground and its consecration mark the beginning of his treatment of temple structure. A large variety of pillars of different materials, size and shape and a wide range of varieties of *Maṅṭapas*, halls for worship and assembly are enumerated, defined and described. The author acquaints the readers with ten different patterns of towers (*gopura*), which cover almost all the temple towers, one may come across during a tour or pilgrimage. The *Vimāna*, the dome over the *Sanctum Sanctorum* is the most sacred part of a temple and each famous temple has a distinct type of *Vimāna* to enshrine the holy Deity. The author sets forth almost all types of *Vimānas*, prescribed in the *Āgamas* and *Silpas*, classifying them on the basis of their type and the number of storeys comprising them. With similar elaborateness, the work gives an account of council-chambers, *darbar-halls* and public gathering places.

This short and sketchy account of the contents of *Mayamata*, it is hoped, will enthuse seekers of knowledge to a desire to drink deeper of the well of *Silpa Sāstra* and to look forward and also backward to our other publications on this subject.

Our thanks are due in an abundant measure to Sri K. S. Subrahmanya Sastri who has spared no pains to make the edition correct and useful and

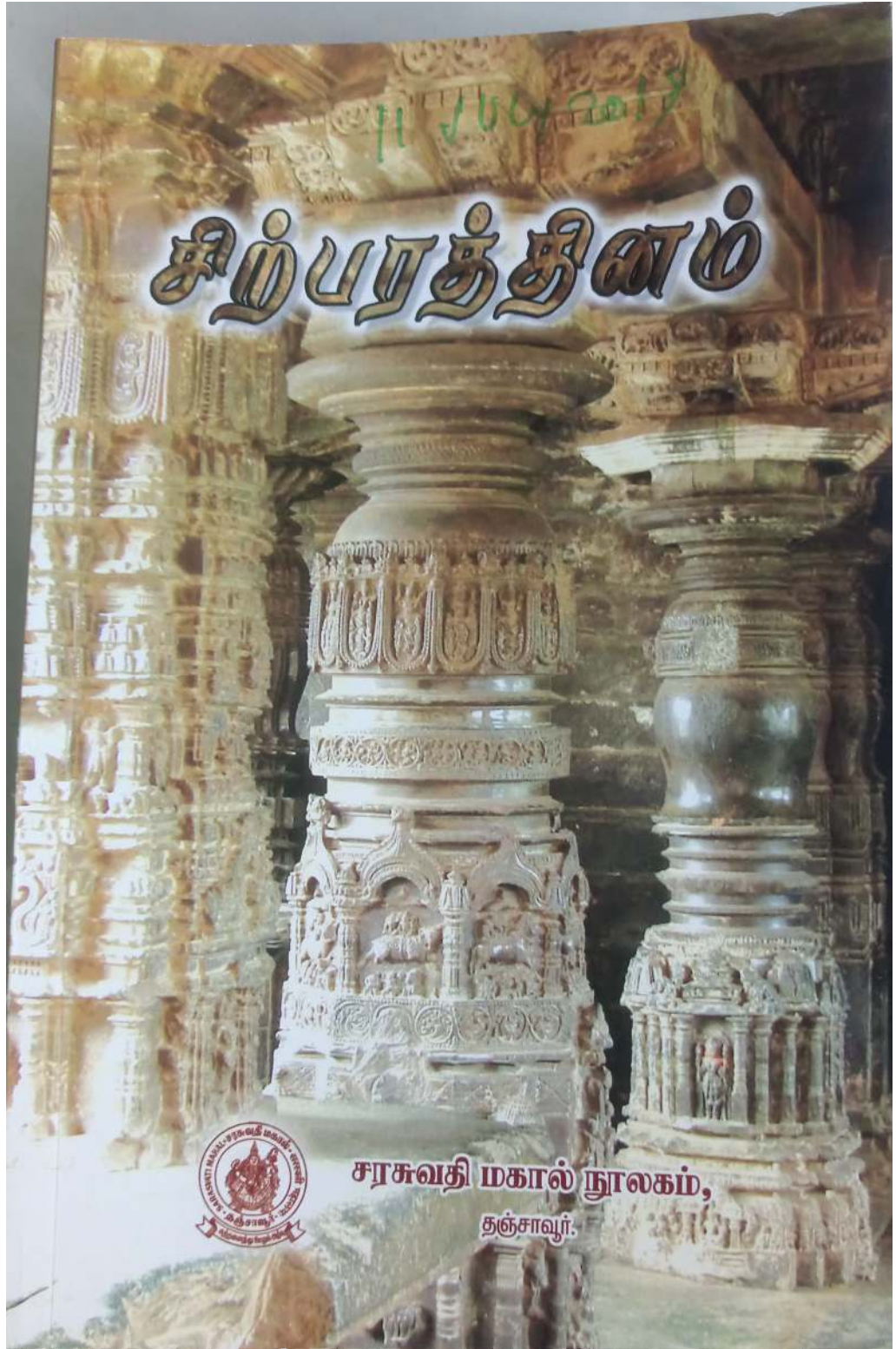
who has attempted well the difficult task of writing a clear and reliable translation into Tamil.

This book is printed and published under the scheme of the Government of Madras, (G. O. Ms. No. 1621 Education dated 24—9—1957), who have selected fourteen important and ancient Sanskrit works in *Silpa Śāstra* and directed us to publish the same with the original text in Grantha script and a translation into Tamil, to facilitate their being studied by the *Sthapatis* of Tamil Nad. We have published seven out of them already and this is the eighth in the *Silpa* series and Volume No. 113 in the series of the publications of the Sarasvati Mahal. But for the financial aid of the Madras Government, many of these works might not have come to light but might simply lie imbedded in the shelves of manuscript libraries. By arranging for their printing and publication, the Government have not only earned the gratitude of the *Sthapatis*, scholars and art-lovers of Tamil Nad, but have also laid us under a deep debt of gratitude for having given us the chance for rendering this great service to the noble cause of the preservation of the ancient treasures of wisdom, to which the T. M. S. S. M. Library stands permanently dedicated.

O. A. Narayanaswami,
Secretary.



1.3.3 சிற்பரத்தினம்



ஸ்ரீ:
மு க வு ரை .

✽ கீழ்வழியைக்? க உ ஸ வு க்கு சூயஸ்?
யதொ ள்ளாவாயுயில் மீஷ்டகக்ஷம்!
உயிர்வெணர் உதவா வுய்யுதொ தவ
யடியு கீஷ்டக்ஷம்வ நாநி யாநயது |
(ருக்வேதம்.—10-81-4.)

சிற்பக்கலை தெய்வீகமான கலை. மனத்தாலும் வாயாலும் அணுகமுடியாத பரஞ்சோறியாகிய கடவுளுக்கும்: "சோதி வெள்ளத்துள்ளே எழுவதோருரு" என்றும், "நெஞ்சினால் நீனைப் பான் பவனவனாகும் நீள்கடல் வண்ணவே" என்றும், "வெள்ளாநுரீகாவிஉதொரூடுமம்:" என்றும் சொல்லிப்படி அடியார்கள் தொழுதெழுவதற்குப் பாங்கான தியமங்கனவீச்சு கம் சமைக்கும் பெருமை இதற்கேயுள்ளது. இவ்வாறு திறமைசாலி யான சிற்பியால் குற்றமற்றதாகவும் கவர்ச்சிகரமாகவும் எழில் மிக்கதாகவும் சமைக்கப்பட்ட சிற்பங்களில், வேதமந்திரங்களாலும், மற்றுமுள்ள பச்சிப் பாடல்களாலும் குழாங்களாகக் கூடி வேண்டப்பட்ட பரந்தாமன், நிரந்தரமாக ஸாந்நித்யம் செய்கருளி

✽ இக்கதப் பூமியையும் இதுபோன்ற எண்ணற்ற கோளங்களையும் ஒரு காட்டிலுள்ள ஒரு மரத்தைச் சீவி உண்டாக்கினால்வலா? அக்கக் காடு எது? அம் மரந்தான் யாது? அறிவாளிகளே! மனத்தால் சிக்கித் துப் பாருங்கள். இவற்றைத் தாங்கியவாறு இவ்வேலைகளைப் பொருப் பெற்ற நடந்தியவர் யார்?

(இது இம் மந்திரத்தின் கருத்து. இம்முடிவுகளின் முடிவில் இக் தேவர்களுக்கு விடை காணலாம்.)



மற்றை நூல்களின் துணையைக் கொண்டு நாம் அவற்றைத் திருத்திக் கொள்ளவேண்டும்.

மொழிபெயர்ப்பு.

முகவியமாக ஸ்தபதிகளுக்காகவே இம்மொழி பெயர்ப்பு நேர் கொள்ளப்பட்டமையின் அவர்களுக்குப் பழக்கமான விரந்த எழுத்திலேயே (ஸம்ஸ்கிருத) மூலம் அச்சிடப் பெற்றுள்ளது. நூலின் கருத்து எளிதில் விளங்குவதையே முகவியமாக உத்தேசித்து, தமிழ்க்கூடையில் கவனம் செலுத்தப்படவில்லை. சாதாரணமாக மக்கள் பேசுவின்ற வழக்குச் சொற்களை மொழி பெயர்ப்பில் உபயோகிக்கப் பட்டுள்ளன. ஸம்ஸ்கிருத சுவோசங்கள் மேலேயும், அவற்றின் கருத்து கீழேயும் பதிப்பிக்கப் பெற்றுள்ளன. ஒவ்வொரு பக்கத்திலும் சுவோசங்களும் அவற்றின் கருத்துக்களும் திட்டமாக வரும்படி கவனம் செலுத்தப்பட்டுள்ளது. சிற்சில இடங்களில்தான் ஏதாவதொன்று மீறிச் சென்றிருக்கும்.

மூலத்தில் பாடபேதங்கள் அதிகம். அவற்றை உள்ளபடியே அச்சிட்டுள்ளோம். பல இடங்களில் அவசியமற்றதாகத் தோன்றிய பாடபேதங்கள் தான் கைவிடப்பட்டன. லிங்கம் (பால்) பல சொற்களிலும் தவறுதலாக உள்ளது மூலத்தில். சூயாஜி (ஆயாம:) என்னும் சொல்— ஆண்பாலில் தான் வரும். ஆணல் சூயாஜி (ஆயாமம்) என்று ஒன்றன்பாலாக இந்நூலில் பலகாலும் வந்துள்ளது. இது போன்றவை மிகமிக வுள. அவற்றைக் கூடியவரை திருத்திப் பதிப்பித்துள்ளோம். பலவற்றை உள்ளவாறே விட்டுப் போந்தனம். கருத்து மாறுபாட்டுக்குக் காரணமாகாத வகையில் சிற்சில இடங்களிலேயே அவ்வாறு திருத்தங்கள் செய்யப்பட்டுள்ளன.

திருவானந்தபுரத்து வெளியீடு ஒன்றையே ஆகாரமாக வைத்துக் கொண்டு மொழிபெயர்ப்பு செய்யவேண்டி யிருந்தது. வேறு பதிப்புகளோ, அல்லது சுவடிகளோ, இந்நூலுக்குக் கிடைக்கவில்லை. சிறப்பகர்த்தங்களின் உட்கருத்தை யுணர்ந்தேழுதுவது

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வெளியீட்டாளர் முகவுரை

ஸாரஸ்வதிய சித்ர கர்ம சாஸ்திரம் எனும் இந்நூல் தெய்வத் திருவுருவங்கள் அமைக்கும் முறைகள் பற்றி கணக்கீடுகளோடு விவரிக்கும் சிற்ப சாத்திர நூலாகும். தமிழகக் கோயிற்கலை பற்றிய அடிப்படை நூல்களான மயமதம், காஸ்யப சில்ப சாஸ்திரம் போன்ற நூல்கள் வரிசையில் இந்நூலும் ஒன்றாகும். கிரந்தத்தில் எழுதப்பெற்ற பழமையான இச்சுவடி நூல் சரசுவதி மகால் நூலகத்தில் மட்டுமே உள்ள அரிய நூல் என்பதும் குறிப்பிடத்தக்கதாகும்.

நாற்பத்தாறு பகுதிகளைக் கொண்ட இந்நூல் மூர்த்தி தீர்மான ஸாதனங்கள், தாலபேதங்கள், மூர்த்தி லக்ஷணங்கள், சூலதாரு லக்ஷணங்கள், ரஜ்ஜுபந்தந விதி, ம்ருத்ஸம்ஸ்கார விதி, வர்ணஸம்ஸ்கார விதி, அக்ஷிமோக்ஷண விதி, ஜீர்ணோத்தார விதி என சிற்ப அமைப்பு முறைகள் பற்றி மிகத் தெளிவாக உரைக்கின்றது. 1960ஆம் ஆண்டில் கிரந்த மூல நூலினைத் தமிழாக்கத்தோடு திரு. கே. எஸ். சுப்பிரமணிய சாஸ்திரியார் மிக அருமையாகப் பதிப்பிக்க, முதற்பதிப்பு வெளிவந்தது. அவரது பணி என்றென்றும் போற்றத் தகுந்ததாகும். ஸ்தபதிகளுக்கும், சிற்பத்துறை வல்லுநர்களுக்கும், ஓவியர்களுக்கும் இந்நூல் ஒரு வேதநூல் என்றால் மிகையன்று.



PREFACE

Saraswathiya Citrakarmasastram, the work that is presented in these pages is a treatise on Sculpture, which is a part of the larger subject called Silpasastra, comprising Architecture, Sculpture, Painting and Craftsmanship. The word CITRA connotes both Sculpture and Painting.

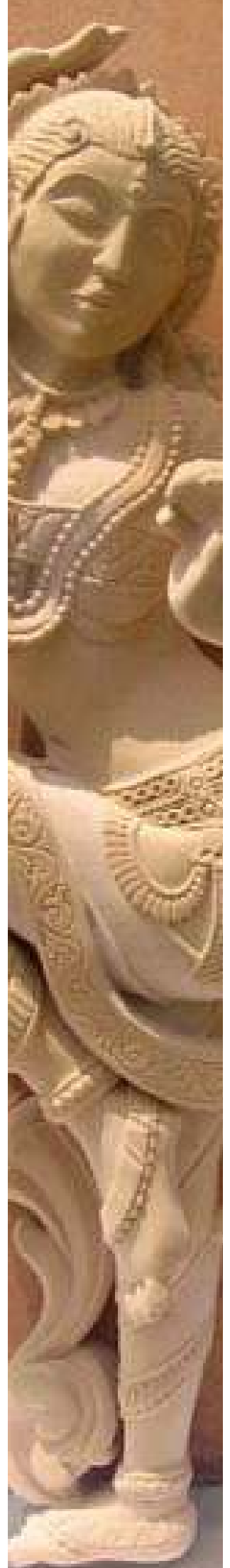
This is one of the fourteen works on Sculpture selected for publication by the Government of Madras in G. O., Ms. No. 1621 Education dated 24-9-1957. The initiative for this scheme was taken by Sri T. K. Palaniappan, M. A. I. A. S., Director of Industries, Government of Madras, who made a list of manuscripts in the Silpa section of Saraswathi Mahal Library fit for publication with the help of the staff of the Saraswathi Mahal. The list was finalised with the help of the Sthapathis and works selected were mainly for use of teachers and pupils in the schools of sculpture at Mahabalipuram, Swamimalai and other places.

Out of the fourteen works mentioned in the Government order six were taken up in the first instance for being edited and translated into Tamil. They were Saraswathiya Citra Karma Sastram, Brahmiya Citra Karma Sastram, Silparatnam, Manasaram, Kasyapiyam and Sakaladhikaram. Of these the present work and its companion work

Brahmiya Citra Karma Sastram are both exhaustive and rare. The manuscripts of these two works are found only in the Tanjore Sarasvathi Mahal Library.

Most of the verses in Silpa works are full of lacunae having been handed down over years and preserved in the families of Sthapathis, who naturally paid more attention to the practice of the Art than the language of the text. These Manuscripts appear almost like worker's manuals with formulas noted in colloquial words.

The present work deals with Saivite idols. In the first thirteen adhyayas of this work, detailed standard measurement for Lingas and Beras from Uttamadasatala to Ekatala is given. Chapters from 14 to 36 deal with the form of Chandrasekhara, Nateswara, Lingodbhava, Dakshinamoorthy, Ardhanariswara, Kankaleswara, Bikshatana, Kalanasana, Kesavardha, Sukhasana, Gangadhara, Chandes-anugraha, Umamaheswara, Kshetrapala, respectively. 37th chapter gives the definition of Vighneswara and 38th, of Subrahmanya. 39th and 40th chapters deal with Bhaskara and Sasta. Chapters, 41, 42, 43, 44 and 45 deal with Suladarulakshana, Rajjubandhavidihi, Mrtsamskara, Varnasamskara and Akshimoksha. The 46th Chapter, the last one in this work, briefly lays down rules for Jeernoddhara - renovation of idols not found in other works.



The Editor Sri K. S. Subramaniya Sastry, Sanskrit Pandit of this Library, has taken great pains in restoring the text and translating it. He has made an excellent job of work and our congratulations are due to him.

Our thanks are due to the Government of Madras for their liberal grants which have helped us to publish this and other valuable manuscripts of this Library.

Sarasvathi Mahal,
Tanjore.
Dated 29 -4-1960.

S. GOPALAN,
Honorary Secretary,
Sarasvathi Mahal Library Committee.

வேண்டுகோள்



சுருணையுள்ளங்கொண்ட நம் முன்னோர்கள், அரிய பெரிய இலக்கியங்களையும், பிறவற்றையும், பணையோலைகளில் எழுதிச் சுவடிகளாக நமக்குத் தந்தனர். அவை பல்வேறு இடங்களில் முடங்கி உள்ளன. சுவடிகள் பழுதடைவதற்குமுன் சரசுவதி மகாலுக்கு அன்பளிப்பாகக் கொடுத்துவினால் அவை மக்களுக்கு பயன்படும்.

மகாலுக்குக் கொடுப்பதன் மூலம், சுவடி தந்தவர்களும், சுவடி எழுதியோரும் அழியாப்புகழை, பெருமைசால் சரசுவதி மகால் உள்ளளவும் பெறுவர். அவை பதிப்பாகி வருமாயின் சுவடி தந்தார் பெயர் இடம் பெறுவதோடு, அப்பதிப்பில் ஐந்து பிரதிகளும் பெறுவர்.

எனவே, “நாம் பெற்ற பேறு பெறுக இவ்வையகம்” என்ற எண்ணமுடைய நற்பண்பாளர்கள் தம்மிடமுள்ள சுவடிகளைச் சரசுவதி மகாலுக்குத் தந்துதவ வேண்டுகிறேன்

மாவட்ட ஆட்சித்தலைவர் மற்றும்
இயக்குநர்,
சரசுவதி மகால் நூலகம்,
தஞ்சாவூர்.

1.4 Engineering Views

1.4.1 Effectively Conserving and Managing Heritage Places of Worship


1.4.1.1 Preventive conservation and maintenance

1.4.1.1.1 Procedure to follow before the Conservation / Renovation works

The conservation of a heritage place of worship covers a range of activities, from ongoing maintenance to large-scale capital restoration projects. Preventive conservation involves developing and implementing a good maintenance routine to reduce deterioration and extend the heritage place of worship's working life. In the long term, it is also cost effective.

A good first step is to develop a conservation plan – a practical guide for carrying out ongoing maintenance routines and repairs, as well as planning for future alterations, development or possible disposal.

A well-thought out conservation plan looks beyond cosmetic work on the appearance of the building to ensuring the short- and long-term stability of the structure. Its purpose is to help manage change in a way that minimizes impact on the heritage place of worship's cultural heritage value or interest without stopping change altogether.



Periodically conducting a full assessment of the property's condition is important to both understand its physical condition and manage changes and alterations. Such an assessment typically includes a review of the following elements of the heritage place of worship:

- **Structural materials and integrity (e.g., foundation, masonry and wood deterioration, interior finishes, hardware and roofing)**
- **Mechanical systems operation and potential issues (e.g., lighting, mechanical, plumbing and electrical systems, energy conservation)**
- **Accessibility, safety and security systems**
- **Exterior property issues (e.g., landscape, drainage, signage, parking)**
- **History of past repairs.**

Decisions about the preventive maintenance of a heritage place of worship should address both the need to conserve its heritage attributes with the requirements of ongoing use. In keeping with the guiding principles, some conservation best practices include:

- **Maintaining heritage attributes on an ongoing basis, with the least intervention necessary**
- **Repairing heritage attributes using recognized conservation methods**
- **Replacing missing or extensively deteriorated parts with original materials, based on surviving prototypes**
- **Conducting ongoing routine condition monitoring.**

1.4.1.2 Conservation Review Board

In addition, key considerations include:

- Reason for the alteration (e.g., liturgical purposes, public safety, accessibility)
- The appropriateness of the proposed design, character and materials proposed
- Other options considered and rationale for the preferred option
- Whether the alteration improves the property's continued use
- Alignment of the proposed alteration with the guiding principles for conservation of cultural heritage properties (e.g., reversibility)
- History of alteration to the building and property
- Visual impact of the alteration on the heritage attributes and appearance
- Visual and physical impact of the alteration on surrounding properties
- Impact of the alteration on other features of the place of worship (e.g., an alteration that allows more natural light into the interior may negatively affect light-sensitive objects such as works of art)
- If heritage attributes are to be removed, the rationale for removal and the process for documentation of pre-existing conditions (e.g., photographs, measured drawings).



1.4.2 The Personnel

One of the fundamental requirement is to have a dedicated and highly qualified Archaeologist, Engineers and Technicians team. This dedicated Archaeologist in the Department will understand more specifically about the Temple Architecture, Sirpa sastras and recommend appropriate conservation practices to be followed in these respective areas.

Starting from Chief Engineer, Superintendent Engineer, Divisional Engineer, Assistant Engineer, Technicians / Craftsman from various disciplines. It is mandatory to have a training program for all the above personnel to be put in place. Reputed third party audit shall be made mandatory to validate the various documents maintained by the different departments. Details are explained in this manual.

These above personnel shall be given constant up-skilling programmes on definite frequencies as per the pre-drawn chart by the talented and practicing specialist; possibly practical on-site workshops shall also form a part of the training programme.

A full fledged Human Resources Development (HRD) is to be in place to manage the personnel with different skills.

1. Sthapathis.
2. Legal department.
3. Jewellery valuers.
4. Landscape developers.

5. Engineering department.
6. Finance department.
7. Information technology department.
8. Jeeyars. ஜியர் சுவாமிகள், மடாதிபதிகள்.
9. Administration.

1. Jeers

- 1.1 Chief Jeeyar and மடாதிபதி
- 1.2 Chiefs at the major temples to monitor the temple rituals and maintain the sanctity.
- 1.3 With a full authority to implement and monitor the religious / Agama activities in the respective temples.

2. Chief Sthapathi

- 2.1 Zonal Sthapathis

3. Advocate General

- 3.1 Advocates specialized in interpreting the HR & CE Manual & the Conservation manual.
- 3.2 Advocates to maintain the land & real estate documents.

4. Jewellery valuers

Knowledgeable person in various type of Jewelleries in the temples.

5. Land scape developers

To maintain the temple gardens (நந்தவனம்). Flowering plants and other general trees and hedging plants. Water resources.

6. Engineering department

6.1 Civil, Mechanical and Electrical

7. Finance department

To develop a system and manage the income generating areas.

7.1 Temple hundies and other receipts.

7.2 Revenue from temple lands and real estates.

7.3 To maintain an inventory of the gifts from the devotees.

7.3.1 Jewelleries, other valuable like claddings, crowns etc

7.4 To establish an auditing system.

7.5 To submit an audited financial Report.

8. Information Technology department

8.1 To maintain the CCTV cameras & related security hardware.

8.2 To develop a network to monitor from the head office.

8.3 To maintain the land & real estate documents digitally.

8.4 Maintain a system of Fire walls.

8.5 To maintain a digital and **Hard Copies** records of the



temple lands & real estates in association with the advocates.

- 8.6 To maintain a digital and **Hard Copies** records of the Jewellery , claddings (கவசம்) , Moorthies / Vighrams.
- 8.7 To maintain the inventory of the தேர், வாகனங்கள், the vessels, laps and other items used in the Sanctum Stotram, and kitchen (மடப்பள்ளி) vessels.

9. Administration

As far as possible , the personnel interested and have faith & beliefs in the religious activities, as per the name of the department - **Hindu Religious & Cultural Endowment Department** shall be appointed.



1.4.3 Civil Engineering Department

1.4.3.1 Maintenance procedure, Charts shall be displayed in the respective temples on a designated areas.

1.4.3.2 RajaGopuram and Vimanam

1.4.3.2.1 The dampness, bats, monkeys and birds can be a major issue. Need to be properly illuminated inside the staircases in every tier from 6:00 pm to 6:00 am. In addition, weldmesh may be provided in all the windows in every tier

1.4.3.2.2 Accumulation of the dust has to be cleaned periodically.

1.4.3.2.3 Ensure vegetations do not grow, if it does to be removed and organic protection treatment to be given

1.4.3.2.4 All the electrical trenches and water drainage trenches including the temple kitchens (மடப்பள்ளி) needs a regular maintenance to eliminate the rats and other insects

1.4.3.2.5 Overhead water storage tanks the main source of seepage

1.4.3.2.6 All the ceilings, pillars, floors, staircases need to be cleaned with the vacuum cleaners to ensure sand / dust particles are removed and disposed off.

1.4.3.2.7 The granite slabs, pillars and walls should be free from lime and red colour (കാഘി) coatings. Otherwise, the culverts and the walls will be disfigured and will disappear over a period of time, denying the opportunity for the future generations to view them.

1.4.3.2.8 The cleaning and swabbing the granite floors shall be done with organic agents.

1.4.3.2.9 As far as possible the metallic hand rails, grills and doors (where it is absolutely required) shall be fabricated with a 304 Stainless steel.

1.4.3.2.10 Wooden doors and articles shall be properly given a coat or varnish / paints as per the requirements.

1.4.3.2.11 Rain water harvesting facilities to be made mandatory to conserve quality water and to avoid flooding. The availability of water as it is a problem in many temples and will pose a serious threat in the coming years.

1.4.3.2.12 Drinking water / open taps provision to be made at appropriate places for washing with an arrangement for disposal of the waste water.

1.4.4 Electrical Engineering Department

- 1.4.4.1 Proper wiring / electrical drawings with all the minute details prepared in accordance in the Electricity Board requirements and displayed at the Maintenance department / Executive officer's office.
- 1.4.4.2 As far as possible the cables are to be used, better to avoid the trenches, open wiring in plastic pipes and trays. Run this pipes in the corners of the ceiling so that not visible much.
- 1.4.4.3 Earth pit is a prime requirement need to be redone as per the recommendations of the EB or atleast once in a 4 /5 years
- 1.4.4.4 The strength / weakness of the cables need to be tested as per the requirement
- 1.4.4.5 Where the cables needs to cross the pathways / streets within a temple, instead of trenches, large diameter heavy duty plastic pipes to be used. Because, monkeys may damage the cables.



1.4.5 Waste Management

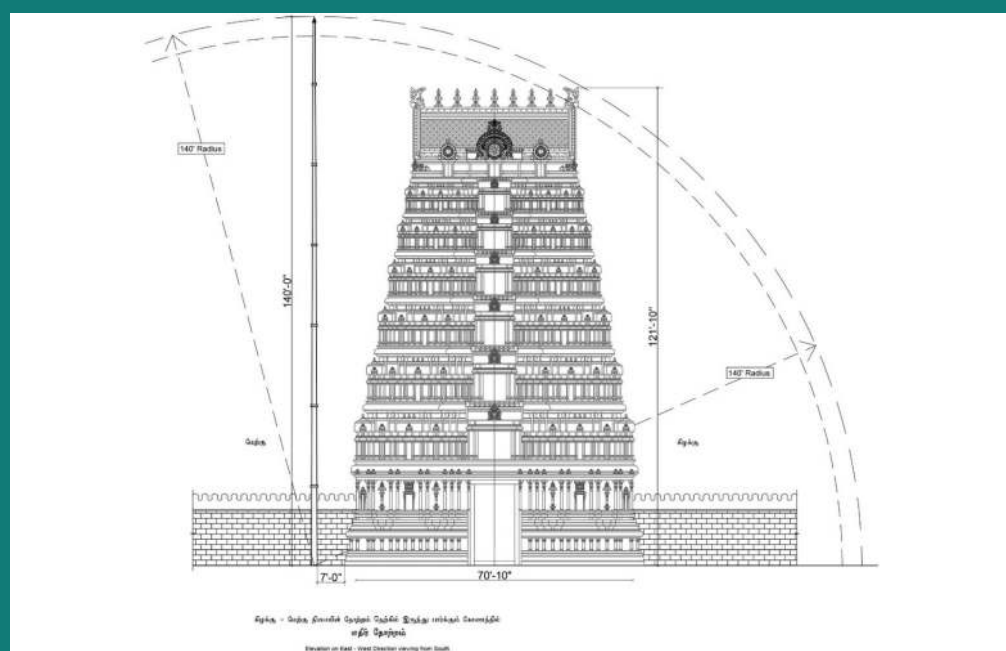
- 1.4.5.1 உடுத்து களைந்த, garlands, flowers to stored, either converted to fertilizers or in accordance to agamas. Similarly the used clothes. Need to interact with Archagars.
- 1.4.5.2 அன்ன தான கூடம், waste / disposals need to converted to Fertilizers. Modern cost effective technology available.
- 1.4.5.3 Waste generated from the Pooja materials, given a proper care.
- 1.4.5.4 Waste collection baskets to available at the appropriate places.



1.4.6 Lightning Arrester

1.4.6.1 The lightning arrester is the main requirement to protect the Gopurams from natural calamities.

1.4.6.2 **It is preferable to locate the lightning arrester independent of the Gopurams to facilitate easy repairs without disturbing the Gopurams from Engineering / Agama point of views.**



1.4.6.3 Illumination of the Gopurams shall be done with independent focusing lamps instead of fixing the lights on the Gopurams, because they need frequent replacements. Everytime climbing up is not a easy task and not a recommended practice.

1.4.7 Conserving / Creating the Landscape of Heritage

Places of Worship

In both small rural communities and urban centres, heritage places of worship are often landmarks and noted for their physical presence within a broader context.

The landscape surrounding a heritage place of worship contributes to its “sense of place”. Often, a heritage place of worship may have an associated buildings, monuments or heritage plants. It may be part of a heritage conservation district or a cultural heritage landscape.

Conservation of landscape design

- Original trees, plants and landscape design should be maintained as much as possible.
- New trees, plants and landscape design should be sympathetic to historic planting schemes and design, and the heritage place of worship.
- Existing or new trees, plants and landscape design should not obscure views of the heritage place of worship.
- The design and materials of footpaths and parking areas should be sympathetic to the landscape and the heritage place of worship. Footpaths and parking areas must also comply with municipal zoning or bylaws and accessibility requirements.
- The periodic condition assessment of the property should include looking at the exterior for potential damage to the



building, such as:

- Trees and shrubs planted or growing too close to foundations, walls and roofs
- Grading around buildings and on parking lots continues to drain water away from building foundations.
- During building maintenance or construction, trees should be protected by hoarding around the drip line to reduce damage to the roots.

Nandavanam, Flower / Tulasi Garden is an essential part of an any temple. It's preferable / advisable to offer the flowers, or garlands for that matter, grown cultivated in the temple premises or flower gardens dedicated to the temples and managed by the temples.

This is very important to maintain the sanctity in the temples; flowers / tulasi are to be cultivated with certain discipline, using clean water. Chemical fertilizers and chemical pesticides are strictly prohibited, as this might endanger the holyness and sanctity in the Sanctum Santrum as well as the health of the devotees. This will eventually lead to serene and healthy environment in the temples.

The personnel appointed to collect the flowers and Tulasi from the gardens are to follow certain rituals and flowers to be collected preferably immediately after dawn and before noon.

The baskets used for collecting the flowers shall be made from **Thatched** leaves (பனை ஓலைகள்) and not from plastics.

For Example in Shree Pundarikatcha Perumal Temple in Thiruvellarai , we have planted almost 1000 tulasi plants along with about 100 Jasmine plants of 4 different varieties, நந்தியாவட்டம் மலர்கள், அரளி பூக்கள், மனோரஞ்சிதம், விரிச்சம் பூக்கள் (சிவப்பு மற்றும் வெள்ளை), பவள மல்லி மற்றும் வெட்டிவோர்.

We have provided drip irrigation and sprinkler systems to safe guard the plants in the extreme summer heat conditions.

And there is a dedicated person to collect the flowers and to maintain the plants, he is supported by a couple of full time gardeners.



1.4.8 Fire Fighting Systems

1.4.8.1 Provisions to be made at the appropriate places

1.4.8.2 It is also preferable to have a telescopic ladders either independently or mounted on the vehicles need to be in place depending upon the space availability at different temples. These ladders may also be useful for carrying out the mechanical maintenance of the Gopurams.



1.4.9 Auditing Systems

- 1.4.9.1 Auditing the above points are highly important.
- 1.4.9.2 **Any system un monitored will not give the desire results.**
- 1.4.9.3 At least once in a year HR & CE department officials makes an audit, review and store the audited documents for future verification.
- 1.4.8.4 **Any person involved in the temple affairs and Trust board members can also contribute wherever they can so as to make a system work properly / efficiently**



1.4.10 General

1.4.10.1 Though it may be difficult to implement the above procedures in the short run but over the period of time, it will definitely yield results .

1.4.10.2 Monthly / quarterly / half yearly / annually reviews are essential and the necessary corrective and preventive actions taken need to be documented.



OUR HINDU TEMPLES.

Our **Temples** and **Deities** were conceived and given shapes over the period of **millenniums**, by different Rulers in accordance with **Agama Sastras** laid out in our **Vedas**, again thousands of years before.

This was further, reiterated / revisited by our ஆச்சாரியார்கள், ஆழ்வார்கள் மற்றும் நாயன்மார்கள் in the past 1500 years or may be more; we may be incorrect in our views but however ,we welcome corrections / suggestions.

And most important , all these our Temples are living monuments and Pujas / worships are being performed in accordance to our **Vedas** on day to day basis , round the year.

And the **Temple Renovations, Conservations and Preservation** are performed according to **Agama / Shirpa Sastras**.

Shri Pundarikatcha Perumal Temple in Thiruvellarai, is governed by **Pancha Ratra Agama** and all the daily rituals are performed as slated above. In these circumstances, we carry out the renovation, reconstruction, additions to the existing Raja Gopuram strictly in accordance with **Agama Principles**.

Further we have submitted a detailed report, quoting references from **Agama Sastras**, received from 4 different **Vedic Scholars**, in support of our **Renovation / Construction** activities.

All the above mentioned points were discussed with the visiting **UNESCO**, India officials during May 2017. They gave a patient hearing and **appreciated** our renovation activities, the Technology followed, and most important our **documentation** And **presentation** style.

Further, they also agree to conduct an **agama workshops** and submit their recommendations to The Honourable High Court of Madras.

Accordingly, they did conduct the **agama workshops** for two days in Chennai, during November 2017. It was well attended by the experts from different disciplines.

We also participated and presented our views to the audience as well as to **UNESCO, India**.

A couple of weeks before, we requested **UNESCO**, India a copy of the report, since we were one of the stake holders. Yet to hear a response from them.

1. UNESCO.

UNESCO, India has virtually no role to play in our Hindu Temples in regard to Conservation, Preservation and Maintenance. Our **Agamas** clearly specify and explain the procedures to be followed for every aspect, since our Temples are living monuments, not the right word, because they are living places / abodes of our **Gods**, the devotees come to the temples with lot of faith and belief.

2. Archaeological Society of India - ASI

The purpose of establishing the Archaeological Department in HR&CE is explained in the manual. But the general ASI has a wide ranging activities; we appreciate the importance of such an institution to Conserve, Preserve and Maintain such historical monuments and sites in general.

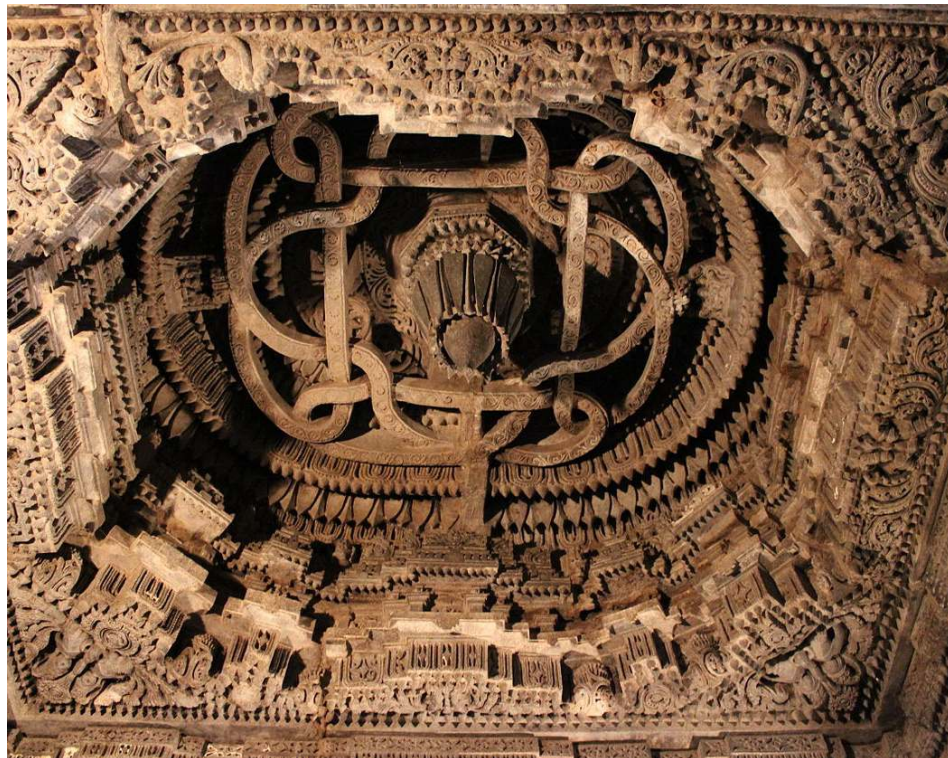
But since our Temples are a abode of our Gods and they are living monuments and visited by the devotees with lot of devotion and faith , the ASI and the general purpose Archaeologist team's role may not be appropriate.

A full time Archaeologist with a belief in our faith and worship, specifically appointed by HR&CE, up skilled and constantly trained by our **Sthapathies** and **Agama** experts will definitely contribute and play a significant role in maintaining the

inventories in electronic and Paper formats of our invaluable **Moorthies / Vigragams** produced from Panchaloga metals, wood, Granite and other precise **Gems**.

In todays times, one could see enough and more information about theft of Idols / Moorthies and Vigragams. Already hundreds of such idols, if not in thousands, are stolen / robbed / illegally shipped over the period of centuries. Fortunately most of the Idols are exhibited in the museums all over the world.

Therefore a dedicated Archaeologists and his team in association with Sthapathies shall also be responsible for establishing and maintaining both open air and closed indoor museums and the relevant records.



Summary.

With all humbleness, we would like to present our views on this topics.

1. Since **Pundarikatcha Perumal Temple** is a living monument , this doesn't come under the purview of **UNESCO**.
2. **Agama** principles are followed meticulously, in all aspects.
3. The Architecture / fullness of the temple must be completed.
4. Most important, the entrance must be welcoming.
மங்களமாக இருக்கவேண்டும்.
5. Like we, every visiting **devotee** is most anxiously looking to see the **RajaGopuram** in it's full Grandeur.
6. The Archagars and the common public are anxiously looking for the full **RajaGopuram** to it's 7 tiers.
7. For the well being of the citizens and the country, the **RajaGopuram** must be completed **asap** and the **samprokshnam** to be performed.
8. Most important. **Srirangam Raja Gopuram** was also remained மொட்டை கோபுரம், for hundreds of years, completed to it's full grandeur 13 tiers in the year 1982, if we are correct.

குறள் 3:

மலர்மிசை ஏகினான் மாண்டி சேர்ந்தார்
நிலமிசை நீடுவாழ் வார்.



மு.வரதராசன் விளக்கம்:

அன்பரின் அகமாகிய மலரில் வீற்றிருக்கும் கடவுளின் சிறந்த திருவடிகளை பொருந்தி நினைக்கின்றவர், இன்ப உலகில் நிலைத்து வாழ்வார்.

