### **Book Review**

# Nārada Śilpaśāstra: Sanskrit Text on Architectural Civil Engineering

by

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The Nārada Śilpaśāstra (NSS) is a very welcome addition to the texts on vāstu śilpaśāstras. In the last couple of decades many translations of the Sanskrit texts of the śilpa śastras have been made and they have added a great deal of knowledge regarding the theory as well as the practice of traditional building and sculpture. Texts such as Mānasāra, Mayamatam, Samarāngana-sūtradhāra, Manusyālaya Candrikā have been translated several times by various authors and the reviewer had the good fortune of studying these texts also from the application point of view under the guidance of Shri Ganapati Sthapati. The texts mentioned above are more or less similar in their treatment of the subject and offer some details about each of the sub-divisions that come under the broad title of *vāstu* and *śilpa*. What sets *NSS* apart from them is the addition of information regarding the engineering and technical aspects of construction.

The book under review has the following description about it:

India has a rich and ancient tradition of building cities, monuments, towers, dams, bridges, reservoirs, step-wells and other civic infrastructures besides beautiful temples and palaces. Some of the present-day highways are aligned on ancient tracts that were first laid several centuries ago. There are several

ancient Sanskrit texts known as either vāstuśāstra or *śilpaśāstra* that describe some aspects of residential building, temples and other structures. The present text, attributed to the authorship of Nārada, the legendary sage and polymath, is a vāstuśāstra text, although traditionally the manuscripts are titled Nārada Śilpaśāstra. This text, in terse technical Sanskrit prose describes site selection, planning of villages and cities, construction of road, dams, lakes, foundation, basement, and super structure of private and public buildings including marriage halls, art galleries, theatres and temples. Internal evidences point out that in its present form, this text originated at a time when weekdays were not in vogue but acquired additional material at a later period and fixed in South India around 6th Century CE.

Professor R N Iyengar himself a renowned Civil Engineer, helped by two reputed Sanskrit scholars, has for the first time brought out this unique Sanskrit text on the theory and practice of Architectural Civil Engineering in ancient India with Introduction, translation, notes and figures.

It is indeed a very comprehensive and a highly informative text for scholars and practitioners alike.

The name Nārada may refer to the mythological sage, who was considered to be a polymath of extraordinary capabilities. Many texts of many subjects have been attributed to his name but it is also possible that he was a founder of a school of

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*vāstu śilpaśāstra* and therefore all the books may have come out of this school, according to the author. There are mentions of Nārada as one of the prominent teachers of the subject in several references from different parts of the country.

#### CHAPTERS AND THEIR CONTENT

It is important to note that there are many interesting new aspects to this text that is not found anywhere else. It deals elaborately on roads, water sources, fortifications, varieties of large buildings such as palaces and marriage halls, details about furniture, as well as extensive information regarding village and town planning. The author has also added value to many of these concepts by developing drawings that throw light on complex descriptions that may be difficult to visualise.

A great deal of information has been offered in the chapter on fortifications that the reviewer has never come across in any other texts. For example, there is a description of *vana-durga* or forest fort. It talks of the type of trees that are found in the forest; the type of moat to be made; the kind of doors or gates to be built within the walls; the type of drain or tunnel to be built; residences for the people, the merchants, the administrators; and the nature of security to be offered in such a fort. One can almost visualise from this description how this fort would look when completed.

In a chapter on palace complexes detailed descriptions are given regarding the royal palace, the queens mansion, marriage hall and the visual details in each. In fact, the closest comparison to the detailed descriptions given in this text can be made to the references available in classical Sanskrit Literature such as Bhasa's literary texts.

The details offered in the chapter on interior planning, furniture and window openings are also very unique. The book provides detailed description about many aspects of architecture like: **Bedrooms**: 'With three times the width or of oblong/*māṇḍalika* form the bedroom is planned. At the central *brāhmika* spot the bed is placed.'

*Nātakaśālā* or theatre: Theatres are classified into three types: *daiva*, *gāndharva* and *kśātra*. The first should be planned in temples, the second for general public and the third in palaces. The first must show divine emotions, the second must show all emotions and the third must show heroic emotions.

**Dolā lakṣanam** or the details of a swing: These may be placed in marriage halls, chambers of the queen in living rooms or in reception rooms. The swing should be either flat or like a box and hung in the middle of the hall with the top held by iron chains and the seat covered with silken cloth made of jute.

Citra alankriti or artistic decoration: It is classified in three ways: art for the floor, art for the wall and art for the roof. Floor art can be at the threshold, veranda, courtyard and bedroom. It can have illustrations of bird figures, elephants, horses or serpents. The wall art can have images of deva, gandharva or yakśa.

This book also offers data which is similar to other *vāstu* texts such as the *vāstu puruṣa manḍala*, temple design, rituals for the site, *āyadi lakṣana* and types of village and town layouts.

The following critical details found in various parts of the book regarding roads and water resources are unique to this book.

**Roads:** After marking the site for villages and towns the planner has to create exit roads that are suitable for animal-drawn carts. The village road should be laid out for a width of one *sūtra* unit, the city road should be twice or thrice the same, the high way should be four, five or six times the same. The highway must have rows of trees providing dense shades on either sides and culverts for the fall of water.

Water resources: Reservoir should be constructed at a suitable elevated spot not far from the village or city to the east, south, west or north. This must be surrounded by strong stepped embankments and the place must be on good quality soil. At the border of a village or city a deep pond has to be dug out which has continuous oozing of sweet water out of gravelly sand. The pond should have an outlet for stagnant water and provision for fresh water with an enclosure and gate with a layer of moss. In the construction of anicuts the base should be of iron, broken pebbles mixed with lime and brick inside a deep pit. At the ground portion the bund has to be constructed. Above this, check dams with sluices should be constructed.

As can be seen in the above examples this text offers a great deal of information on the practical aspects of construction and also throws light on some of the great engineering marvels that can be seen in the grand anicut in Tamilnadu, the water management in Vijayanagara, the palace and water management in central India and finally the amazing rain water management in Rajasthan and Gujarat.

The structural details starting from foundation all the way to the top or Śikharam are very elaborately dealt with which is an added aspect in this text. In the temple design also, various aspects of the temple are dealt with in a more systematic manner than found in other texts.

#### Conclusion

In my understanding this text is a unique addition to traditional knowledge and definitely adds great value to the comprehension of many religious and secular structures as well as the management of water bodies, wells, reservoirs, roads and structural management of buildings. The authors have done a marvellous job in bringing such a versatile text to the public notice. It is also a welcome interpretation of textual data by a team of scholars and technical experts which makes the reading of the translation easy and applicable. I believe that this text can definitely influence both scholars and practitioners to take traditional wisdom seriously and begin the task of interpreting various great monuments using the texts in appropriate ways.