CHAPTER-I

"Oam anugraha rupāya vidmahe
Bhumī putrāya dhīmahi
Tanno Vāstu pūrusha prachodāyat"

Vāstu Gāyatri
CHAPTER – I

INTRODUCTION

1. ORIGIN OF VĀSTUŚĀSTRA

Architecture and *Vāstu* are not identical and *Vāstu* is not an equivalent word of the word architecture. Architecture is an important science which is based on numbers, mathematics, art or profession of designing and constructing buildings etc. But *Vāstuśāstra* is much larger than the science of architecture. It is a natural science which is vast and comprehensive. It finds its importance in all kinds of buildings, be it home or office, factory or commercial places. The definition of *Vāstu* extends to the science of *STĀPATYA KALĀ*.

Architecture, the matrix of civilization might have begun with the growth of civilization itself.¹ It can be said that architecture is the best example of man’s intellectual development. It is through the art of building that we can have a clear picture of the social, political and spiritual life of the people of a country in different ages. Looking at the Indian monuments, we find a rich variety, revealing a great cultural heritage.²

With the increasing desires of man in modern times, the ancient culture and behavior patterns are losing their importance. However, with the popularity of *Vāstuśāstra* in these days, it appears that man has come to know the importance of his ancient cultural values. The importance of *Vāstuśāstra* has augmented in modern times.

The complete wisdom of *Vāstuśāstra* is based on scientific facts. It takes in view the harmony with nature and considers Sunrays, gravitational force, magnetic power, geographical conditions, the five elements (Pancamahābhutas), and directions besides all other natural phenomena that may have a bearing upon a house.
In a residential building, the main purpose behind the application of principles of Vāstuśāstra is to evade destructive forces of nature and to blend constructive forces to enable inmates of a building to lead a happy, peaceful and prosperous life.

2. ORIGIN AND DEVELOPMENT OF MANUŚYĀLAYAS

Once, in the hoary past, people living in forests, on the banks of rivers and underneath shady nikuñjas, entered into heaven. There they began to roam and enjoy themselves under the Kalpa Vṛkṣa. In due course, they became arrogant and were cursed to come down to the earth. For their sustenance, Śāli Tandulas which was very delicious to consume appeared on the earth. Being afraid, they began to hoard it. The result was that the lust for hoarding gave birth to other evil consequences like greed, envy, jealousy etc. In due course greed became instrumental in giving birth to Manmatha (passion), which resulted in forming the couples among themselves. These dvandvas became the cause of sufferings and misfortune. Their immortality and longevity disappeared. Therefore, they started searching for shelter in order to protect themselves from scorching sun rays, heavy rain and bad weather.

This is the story of the origin of the first house on the earth for men to live happily. Caves constituted the primitive shelter of human beings. But this cave’s mouth was so large that other animals too chose to dwell in. Therefore, for his self defence, man started piling stones of small size at the mouth of the cave with its entry point being open. Since the dwelling in the cave was not possible for all men in all times it is presumed that the human habitation was shifted to man built houses on the tree tops. Similar descriptions about the first house on the earth with tree as its model are available in Mārkandeya Purāṇa, Vāyu Purāṇa and Matsya Purāṇa. The Sutra literature also supports this tree model of primitive house. Ouseph says “The basic need of man viz. food, cloth, shelter etc. was met by the trees. Hence the trees were known as Gruha Vrukshas.” The Mānasāra describes five main pillars of a house such as
Brahmakānta, Visṇukānta, Rudrakānta, Śivakānta, and Skandakānta which supports tree as a model of house having its basis on the different parts of its branches because here Kānta refers to kānda or the trunk of the tree.

The SS. gives a long list of various types of houses like-āvāsa, sadanam, sadnam, niketa, mandiram, samsthānam, bhavanam, niḍān, gehām, layam, vesma etc. The APP gives various names to houses depending upon the doors; a house with the door in east is called Gṛham, a house having one door is called Vesma, a house having three doors is called Karanām, and a house with doors in east and west is called Nilaya etc.

Since Vāstuśāstra takes care of human relation with nature (prakṛuti) apart from the strength of building and aesthetics, the tenets of Vāstu are valid even today and can be very well applied to the modern architecture.

The rules are to be applied in the following areas of modern house-building: selection of site viz. location, testing of soil, shape, level, slope and finding out cardinal points and marking of the sites; planning and designing of structure, selection of material for construction, astrological calculations for auspicious muhurtas for gruhāramba, dwāra bandha, grha praveśa; location of water sources like well or bore well, septic tank; placement of doors, gates, space around building, arrangement of rooms like bed, kitchen, pūjā room, study; placement of Upa-grhaus, steps, balconies, sit-outs, gardens, construction of compound walls, sleeping and sitting positions.

The Viśvakarma-pradipikā explains that creation is another name for Shilpa, and the origin of Shilpa or ‘form’ is Brahmā, Tvasṭṛ and Prajāpati put together. Viśvakarmā is Prajāpati as the universal constructive principle. He is called Viśvakarmā because he created everything. The five heads of Viśvakarmā are Sadyojāta, Vāmadeva, Aghora, Tatpurusa and Īsāna, representing East (Ṛgveda), South (Yajurveda), West (Sāmaveda), North (Athravaveda) and North-East (Prāṇavaveda), respectively. The fifth direction North-East arose from the middle of these four heads. While destroying he is
called Rudra, while protecting Lord Visnu and while creating he is known as Lord Brahman.

Vastuśāstra, in its fullest exposition, belongs to aesthetics. Three prominent schools of philosophy had deep theoretical impact on the evolution of philosophical postulates in Indian aesthetics, viz. Rasabrahma-Veda, Nādabrahma-Veda and Vastubrahma-Veda. The Atharvaveda, however, refers to six regions or lokas and their six respective guardians - Lord Agni (South), Indra (East), Lord Varuṇa (West), Soma (North), Viṣṇu (Fixed quarter) and Brīhaspati (Upward quarter). In the Krusna Yajur veda (Taiṣṭirīya Śamhitās) the same six regions and their respective regents are mentioned, but Viṣṇu is replaced by Lord Yama.

The Manusmr̥ti explains the eight lokapālas viz.: Soma (Chandra), Agni Arka (Surya), Anila (Vāyu), Indra, Vispati (Kubera), Appati (Varuṇa) and Yama. In this list Surya and Soma have been enumerated in place of Nirṛti and Isāna of the later Purānic texts. The Gobhila Gṛhyaśūtra, while describing the rites connected with building of a house, states that offerings should be made to the regents of ten regions (disās), namely, Indra (East), Vāyu (South-East), Yama (South), Pitṛ (South-West), Varuṇa (West), Mahārajā (North-West), Soma (North), Mahendrā (North-East), Vasuki (Nadir) and Brahma (Zenith).

The Vastuśāstra Upaniṣad is fundamental of other known texts. It is a profound study of the principles of origin of the 'how' and 'why' of form figuration and of its ultimate necessity and purpose. Dealing exclusively with the composition and layout of sculpture, it contains an esoteric doctrine, in which the production of shilpa is considered as a sacred act. In sage Pippalāda's conception, the language of form is equivalent to the spoken or written word or 'Vāk' giving expression to a vision of divine truth.

Vastuśāstra essentially deals with practice of architecture and building / construction science, and it touches every facet of life on this earth and the universe. The ever-present link between man and the cosmos is the basic
theme. The learned men of those days may not have lived in houses themselves but they most definitely dedicated their lives to the development of the science of Vāstu as it is popularly known today.

It is a part of Vedāṅga Jyotisa. Principles of Vāstu as enumerated in classical texts are universally applicable irrespective of region, religion, caste and creed even in the modern times.

The principles of the science laid down during those days were based purely on the effect of sunrays during different times of the day. The observations and corrections made were noted and concluded only after in-depth screening of the situation. It used to be a purely technical subject and was only confined to architects and handed over to their heirs. The principles of construction, architecture, sculpture etc., as enunciated in the epics have been incorporated in the science of Vāstu.

Since Vāstuśāstra takes care of human relation with nature (prakṛuti) apart from the building strength and aesthetics, the tenets of Vāstu are valid even today and can be very well applied to the modern architecture. Tenets of Vāstu very well be applied to the modern house building in the following areas: selection of site viz. location, testing of soil, shape, level, slope and finding out cardinal points on the site, planning and designing of structure, marking of site, selection of material for construction, astrological calculations for auspicious muhurtas for grhāramba, dwāra bandha, grha praveṣa, location of well or bore well. location of septic tank, placement of doors/gates, space around building, arrangement of rooms like bed, kitchen, puja room, study, hall etc., placement of upa-grhas, steps, balconies, gardens, construction of compound walls etc. sleeping and seating directions etc.

The Mānasāra\textsuperscript{14} insists that whatever the scriptural injunctions, clever architect must use his intelligence and discretion to make the building useful and delightful. The council of expert architects is of greater importance than canonical principles.
The Yukti Kalpataru in section Rājagrha yuṣṭi suggests that the rules provided in Vāstu texts are only broad guidelines or niyamas, so the actual principles are to be followed while building a house. The architect, as himself is the best judge, has to be pragmatic and rational.

Since the Samarāṅgaṇa sūtradhāra (SS) is generally accepted as an authoritative text on residential architecture I wish to make an exhaustive discussion on the text in the following pages.

3. PLACE OF SAMARĀNGAṆASŪTRADHĀRA :

The Samarāṅgaṇa sūtradhāra (SS) is a remarkable legacy of Bhoja whose rule was noted for splendur and grandeur together with liberty and catholicity in Dhārā, the kingdom of Mālava from 1018 AD to 1060 AD, the first half of 11th century. It is also a brilliant testimony of his grand and eloquent style not only in the field of literature he produced but in every walk of life. It testifies to his life of a benevolent king-his court, his administration, his patronage of art and literature, his ideal of social conduct and religious dedication. D.N Sukla says “the SS. reads like a Purāṇa of Vāstuśāstra” , the whole work is a master piece of original contribution on this subject, and the author may be deemed as the founder of the civil architecture among the ancient classics of this branch of lore. But, P.K. Acharya did not agree with such opinion. He observes in his Hindu Architecture in India and abroad that, “ in SS there is no logical sequence in arranging the chapters, same thing has been described in various chapters repeatedly, and this work has been based on Mānasāra”. Felix Otter observes the treatment of residential architecture found in SS is not the earliest example of such an exposition, as it is preceded by Brhat Samhitā(BrS), Matsya Purāṇa(MP), Visvakarmā Prakaśa (VP). As quoted by Utpal in his commentary, it cannot even be said to be the most exhaustive specimen either; for instance, the treatment accorded to the residential buildings (the eka, dvi, tri, and catuhśśālās) in the text of Mayamatam (MM)is just as comprehensive and in-depth by any standard. Of course, relatively a recent and popular text
Manusvālayacandrikā 21 (MAC) of Nilakantha Mūsat has dealt with this subject vividly.

The SS consists of roughly 7430 slokas in 84 Adhyāyas. Mattia Salvini says that although the size of the SS remains impressive including the ‘interpolated section’ running for almost 7,500 Sanskrit verses, it is incomplete. The various portions resemble, in turn, a Purāṇa, a treatise on architecture, a disquisition into dramaturgic detail and much more.22 However, there is still a possibility that SS was originally designed as a treatise on residential architecture and that most of the materials on temples was interpolated by later readers of the text. However, SS, the monumental work of King Bhoja, can be treated as a complete manual on Vāstuśāstra.

SS deals with the origin and scope of Vāstuśāstra, town planning, house architecture, temple architecture, designing of machines, the household furniture; the sculptural subjects like pratimā lakṣana-s, iconography, iconometry and iconoplastic art, canons of paintings, various mudrās; and cosmology, geology, astronomy and geography.

4. SAMARĀNGAŅASŪTRADHĀRA

Vāstu Śāstra, the other name of Samarāṅgaṇa sūtradhāra, is referred to at the end of 1st to 57th and the 59th adhyāyas of SS.23 It literally means an architect of human dwelling. But Agrawala explained the name SS is worthy of attention. The word Sūtradhāra literally means “thread bearer”, i.e., an architect who takes his measurements by means of the plumb line. Here is a pun on the word “samara” which means both a battlefield and a mortal human being “sa+mara = destined to die”.24 Thus the title as applicable to Bhoja would signify firstly that he was the architect of the fortunes on the battlefield, i.e., who planned the course of battle leading to victory, and secondly, he was the architect of human dwellings, i.e., civil architecture on an extensive scale. Shukla 25 has subjected the compound to a pseudo-classical analysis of his own devising:
“Samyānci arāni samarāni (tathā bhūtāni) aṅganāni (etādrusāni bhavanāni sālābhavanāni ityarth), athavā samarāni samyuktāni aṅganāni, yesām tāni,(bhavanāni ityarth) tesām sutradhāra.” Pareek, 26 on the other hand, believes that the title is derived from the treatise compiled by sūtradhāra Samarāṅgaṇa under the patronage of the Paramāra king Bhojadeva of Dharā.

4.1. SAMARA

The term Samara is not often encountered as denoting ‘mortal’, none of the dictionaries have incorporated this meaning. Rather its conventional meaning is ‘battle’ and ‘strife’, derived from the root ‘sām+r’ to meet encounter or clash.

Among the five other titles besides SS recorded in CC 27 beginning with samara, there is one work called Samarakāma dipikā which is classified as ‘erotic’. It is rather unlikely that samara here is translated as ‘battle’. If we accept its meaning as mortal being, the whole title could roughly be translated as ‘the lamp or elucidation of the passion of mortals, or of mortal passions.’ This would suggest that there is in fact a Sanskrit word samara (mortal being) apparently with the etymology suggested by Agrawala (sa-mara). 28

4.2. ĀNGAŅA

Sastri, Agrawala and Shukla have accepted Angaṇa as human dwellings. But, Otter translates it as ‘courtyard’, though courtyard is an integral part of a house.

4.3. SŪTRADHĀRA

The word sūtradhāra does not occur in early Indian inscriptions which belong to the pre-Gupta period. The earliest occurrence of the word sūtradhāra is found in the fifth inscription of Ajanta cave no.15. We sometimes come across the mention of sthapati, the architect, as in the case of the Peshawar museum inscription of Vanḥadaka. But from the fifth century onwards, the word sūtradhāra began to occur in epigraphical records and continued for a long time till about the Vijayānagar period when the Muslims dominated the greater part of the country. 29 The usual designation for “master builder” or architect adopted
in SS is not *sutradhāra* but *sthapati*. This word does not occur in SS and MS too. Rather it has been referred to in APP.

The *Aparājita pṛchā* while narrating the definition of *Sutradhāra* or *stapati* says: \(^{30}\)

Śāśtrajñāna kuśalo dakso vāstu vidyā vivodhakaḥ
Sutradhāra mahāprajñā sat karmaśu niranṭaraṁ (APP.50.1-14)

Thus, the meaning of *Samarāṇgaṇasūtradhāra* as architect of human dwellings seems more appropriate.

5. SCOPE OF MANUŚYĀLAYA VĀSTU

The *Vāstu Śāstra* or Indian Architecture can be broadly divided into three parts such as *Manuśyālaya Vāstu*, *Devālaya Vāstu* and *Pratimā Vāstu*. Out of its eightythree chapters, the SS has devoted as many as twenty chapters to *Manuśyālaya*-s or Residential Architecture, twenty chapters to *Devālaya*-s or temple architecture and fourteen chapters(from 70 to 83) to the subjects, like *Pratimā-laksana* or iconography. The chapters on *Ekaśālā, Divaśālā, Triśālā, Catussālā*, and *Pancasālā*-s, have been extensively utilized in the study of house architecture. The designing of houses for poor, middle and rich classes cannot be similar. Therefore, the author has presented ten varieties of rooms and their sub-varieties in detail starting from *Ekaśālā to Dasaśālā*, according to the need of various classes of people. The numbers of each type are presented in the table 1.1 given below.

**Table-1.1**

<table>
<thead>
<tr>
<th>Ekaśālā</th>
<th>108 Types</th>
<th>Saptasālā</th>
<th>4096 Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divaśālā</td>
<td>52 Types</td>
<td>Saptasālā</td>
<td>18176 Types</td>
</tr>
<tr>
<td>Triśālā</td>
<td>72 Types</td>
<td>Astasālā</td>
<td>65536 Types</td>
</tr>
<tr>
<td>Catussālā</td>
<td>256 Types</td>
<td>Navasālā</td>
<td>262144 Types</td>
</tr>
<tr>
<td>Pancasālā</td>
<td>1025 Types</td>
<td>Dasaśālā</td>
<td>1048576 Types</td>
</tr>
</tbody>
</table>
5.1. REGIONAL PLANNING:

The author of SS says 31 that Brahmā, before creating the world, created Vāstu, which is the essence of planning. All the creations are planned units, and without proper planning no creation is meaningful. Therefore, an ideal planning of a house is necessary for the safety, security, happiness and prosperity of the inmates. While planning for a house, the regional conditions like the character of the janapada, rivers, mountains, forests, and geographical conditions of the locality etc. should be taken into account. We know that the essence of Vāstu is planning. Thus, creation and planning must go together.

5.2. HOUSE PLANNING.

An ideal planning of a house is the prime necessity. The structure, stability, and beauty are essential qualities of a building. In the 1st chapter of SS, it is said that an well-ordered planning of a town or a building is very much essential.32 An architect should have thorough knowledge on the topography of the land, its surroundings, the whole universe, stars, planets, and other natural things like rivers, mountains, seas, etc. The survey of the land, testing of the soil, and geological conditions are of fundamental requirements of the architectural planning.33 A very important aspect of the house planning is its roofing.34

5.3. TOWN PLANNING (Pūranivesa)

The SS says, ‘Nagara, Mandira, Durga, Puṣkara, sāmparāyika, Nivāsa, Sadana, Sadma, Kshya, and kṣhitiyā are synonyms of abode or of a town’.35

The details of town planning, regional survey, the selection of the site and the soil testing are described in 8th, 11th, 12th, 13th & 14th chapters. The secular varieties of Vāstu plots are presented in ch.38th, towns and their categories in ch.18th, and canons of town planning in 10th chapter.
5.4. ROAD PLANNING:

Roads have three-fold functions: they are highways for traffic; secondly they demarcate the plots for buildings and constitute a vital limb in the site-planning and thirdly they have sanitary values of free ventilation. SS prescribes as many as thirty four roads in a model town running from east to west and from south to north. The roads are to be planned in such a manner that it should be straight and there should not be blockage for ventilation. Devipurana and Arthasastra are also in favour of straight and wide lanes.36

5.5. FOLK PLANNING: (JĀTI-VARNĀDHIVĀSA)

The planning of market places, along with other essentials, leading to the residence and establishments of the ‘Jātis’ and ‘Varnas’ is called folk planning. In order to avoid congestion and inconvenience, in the passage of transport and traffic as well as providing the fullest freedom in the circulation, the priority should go to the folk planning first and fortification should come afterwards. The SS does support this procedure ,37 but differs from other texts like MM, MS, AS, and Śukranitisāra.

<table>
<thead>
<tr>
<th></th>
<th>Ksatriyas, Goldsmith, Artist and Army</th>
</tr>
</thead>
<tbody>
<tr>
<td>South-east</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>Vaisyas, potters, dice players,</td>
</tr>
<tr>
<td>South-west</td>
<td>Hoggers, hunters, fisher men</td>
</tr>
<tr>
<td>West</td>
<td>Sudras, soldiers, charioteers</td>
</tr>
<tr>
<td>North-west</td>
<td>Police, labourers</td>
</tr>
<tr>
<td>North</td>
<td>Brahmanas, Astronomers</td>
</tr>
<tr>
<td>North-east</td>
<td>Sellers of butter and fruits</td>
</tr>
<tr>
<td>East</td>
<td>Royal dignitaries, Priest, PM, Commander-in-Chief</td>
</tr>
</tbody>
</table>
5.6. YANTRĀDHYĀYA

The chapter 31st describing YANTRĀDHYĀYA is a unique contribution of SS. The Yantra is defined as the device by which the Mahābhutas like earth, water, fire, air, and ether are controlled. The art of mechanical construction, definition of yantras, varieties of pleasure machines, toy machines, the machines of warfare, as well as domestic machines like Dvarapala yantra, Yodha yantra, Vimana yantra have also been vividly discussed in chapter (31st).

5.7. ŚAYANĀŚANA

A full chapter (ch.29) has been devoted to the construction of household articles like cots and furniture. The sleeping on couches should be started in an auspicious a moment. The wood employed must be from good and auspicious varieties of trees like Candana, Trinīśa, Arjuna, Tinduka, Śāla, Śāka, Śirisa, Āsana, Dhanvāna, Haridaru, Devadāru, Syandanoka, Padmaka, Śrīparṇī, Dadhiparnī, and Śimsapa. The cots which are knotted or inter-woven with gold, silver, ivory, or brass are deemed more auspicious. The appreciated length of couch for Brāhmaṇas should be 70 Angulas i.e., 52.5 inches and lessened by two angulas each i.e., 68 angulas or 51 inches that all of the varnas or casts.38

5.8. ICONOGRAPHY AND PAINTING

In the last fourteen chapters from 70 to 83 the subject like iconography and paintings have been portrayed. The Pratimā laksana, Principal Gods and Goddess, mudrās, the treatment of paintings have been described.

5.9. THE SYSTEM OF MEASUREMENT

The adherence to the measurement is imperative in all creative activities whether it is architecture or sculpture. Unless a building is proportionately and perfectly measured, it can not give an auspicious result. So it is said ‘sāstra mānen yo ramyo sa ramyo nānya eva hi’. The angula (finger-breadth) and hasta (cubit) measures are the earliest unit of measurement. Interestingly, the angula
measure is same in all Indian Vāstu works. Mānasāra is famous for measurement and occupies the first place among Vāstu treatises.

The linear measurement is divided into six types:

1. Māna- Measurement from the foot to the top of the head (height)
4. Lamba-māṇa- Measurement by plumb-lines (surface of the body)
5. Unamāṇa- Measurement of thickness (nimna)
6. Upamāṇa- Measurement of interspace (antara) ³³⁹

The ⁹ᵗʰ chapter of SS deals with Hasta laksāṇa-the measurement. ⁴⁰

6. VĀSTU PURUṢAMANDALA:

The Vāstu puruṣa and Vāstu puruṣa Maṇḍala are complimentary to each other and a composite name. The concept of Vāstu Puruṣa Maṇḍala or the square plan is the fundamental form of Indian architecture. This physical drawing is symbolic of the metaphysical doctrine of all pervading cosmic principle. According to Harivansha, (ch,1-7)⁴¹ “the Purusa is the universal essence, the principle of all things, the prime person whence all originates.” The SS ⁴² assigns to all kinds of prasādas and mandapas, the Vāstu of 100 squares and Vāstu of 64 squares to camps of kings (Sibiras), villages hamlets and the paramasāyaika plan of 81 squares is, in the opinion of the SS, is reserved for the places of Rajās and for the Indraśthāna, the temple of Indra. Special credit goes to the author of this work in the respect that it speaks of circular Vāstu of 64 and 100 squares to be used in circular constructions.”⁴³

7. ARCHITECTURAL TYPES.

It seems very interesting when we observe the following divisions of buildings in various works as shown in table 1.3
<table>
<thead>
<tr>
<th>Texts</th>
<th>classes/storeys</th>
<th>types of buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mānasāra</td>
<td>12 classes/storeys</td>
<td>98 types of buildings</td>
</tr>
<tr>
<td>Agnipurāṇa</td>
<td>05 classes/storeys</td>
<td>45 types of buildings</td>
</tr>
<tr>
<td>Garudapurāṇa</td>
<td>5 classes/storeys</td>
<td>45 types of buildings</td>
</tr>
<tr>
<td>Matsyapurāṇa</td>
<td>3 classes</td>
<td>20 types of buildings</td>
</tr>
<tr>
<td>Bhavisyapurāṇa</td>
<td>Not given</td>
<td>20 types of buildings</td>
</tr>
<tr>
<td>Brhatasamhita</td>
<td>Not given</td>
<td>20 types of buildings</td>
</tr>
<tr>
<td>Kamikāgama</td>
<td>3 classes/storeys</td>
<td>20 types of buildings</td>
</tr>
<tr>
<td>Supravedāgama</td>
<td>3 styles-Nāgara, Vesara, Drāvida</td>
<td>Not given</td>
</tr>
</tbody>
</table>

The auspicious time, offerings, vedi erection, foundation laying ceremony are available in 26\textsuperscript{th}, 36\textsuperscript{th}, 47\textsuperscript{th},and 35\textsuperscript{th} chapters respectively. The descriptions of ekaśālā (in 23\textsuperscript{rd}), dviśālā (in 22\textsuperscript{nd}), trisālā (in , 21\textsuperscript{st} ),catusālā (in 19\textsuperscript{th}), and panchasālā to daṣa sālā (in 25\textsuperscript{th}) are note worthy. Chapters 16, 39, and 41 describe collection of woods, doors, and masonry. The defects of house Gṛuhadoṣa nirupaṇa are presented in chapt. xlvi.

The classifications of house architecture for common people (both high and low) according to caste and profession are available in about a dozen of chapters. It includes foundation laying ceremony, offerings, sālā houses, house materials, masonry, doors, pillars, decorations, veda bhanga, and defects etc.The chapters like Rājanivesa (15th) and Rajagṛha (17th) are devoted to palace architecture, the planning of royal palaces and chapter 30, to different varieties of palaces.

The Asva sālā (ch.33rd), gaja sālā (ch.32nd),Sabhā grha(ch.27th) and the palaces of royal dignitaries like commanders, priests, and ministers have been discussed in SS.
8. ARCHITECTURAL STYLES.

The style is purely an architectural subject because it is not found in Purāṇas. The Nāgara, Vesara and Drāvida are three broad styles distinguished in the Mānasāra. The Nāgara style is distinguished by its quadrangular shape, the Vesara by its round shape and the Drāvida by its octagonal or hexagonal shape. In an epigraphical record, Kalinga is mentioned as a distinct style of architecture.

9. THE SIGNIFICANCE OF THE STUDY:

The study is significant for variety of reasons,

9.1. No study has so far been undertaken in detail on the subject particularly on Residential Architecture. Few scholars like S.K.Sharma, Felex Otter, P.K.Acharya, D.N.Sukla and T.Ganapati Sastri have all either edited or translated the “Samarāṅgaṇa Śūtradhāra” of the celebrated king Bhoja of Dharā. Therefore, the present work primarily concentrates on “Residential Architecture”.

9.2. The scope, necessity and the importance of Manusyālaya Vāstu in the present context is examined by me.

9.3. Its relation with other works on this subject like Mānasāra, Mayamatam, Manusyālaya Candrikā, and Brhat samhitā etc is also examined.

10.1. SCOPE OF THE STUDY:

The present study, Manusyālaya Vāstu- Ekam Adhyayanam (A Study on Residential Architecture) is based on “Samarāṅgaṇa Śūtradhāra” of the celebrated king Bhoja of Dharā, and a comparision has been made with all the established texts.
11. DATA COLLECTION:

An effort has been made to collect data pertaining to the subject both from primary as well as secondary sources. Primary sources like the *Samarāṅgaṇa Sutradhāra* of Bhoja, *Mayamatam* of Maya, *Visvakarmā Prakāsa* of Visvakarmā, and other related books have been consulted. Secondary source materials have been collected from published books, Journals, Magazines, and Periodicals etc and through internet.

11. RESEARCH METHODOLOGY

The research methodologies viz, historical, analytical, comparative and objective, are employed in this work.

12. DATA ANALYSIS

In the present study, the data have been classified, analysed, and interpreted through various tables and diagrams.
NOTES AND REFERENCES

   Architecture: An Introduction to the History and Theory of the Art of Building (1912) And Architecture, Mysticism, and Myth (1891)
   William Richard Lethaby (18 January 1857 - 17 July 1931) was an English architect and architectural historian whose ideas were highly influential on the late Arts and Crafts and early Modern movements in architecture, and in the fields of conservation and art education.

2. Misra, S.S. Fine Arts & Technical Sciences in Ancient India, p. 49


4. *Ityamisun grhiño grheṣu te sitabātajaḷatāpaṇāśiṣu /

   Harṣa sambadita mānasāschiram sannirasta vipadovasan sukham //SS.6,39.


6. MKP, ch-49

7. VP, ch-8

8. MP, ch-VII, 83-120


10. SS, 18.8-9.

11. APP, 69.13

12. APP

13. Boner Alice, Rath Sarma S. & Baumer, B. *The Vāstu Śāstra Upanishad*

14. The *Mānasāra*

   Pujiyam vyayāṁ samāṁ eva tatra doṣa na vidyate,
   Āyādhikam vyayāṁ hināṁ sarva sampātkaram tathā

15. *Bhōja’s* dates are given variously as 1000-1055 AD by the following scholars:
i) Ganguly, D.C. Northern Indian During the 11th and 12th Centuries: The
Paramaras, in: the struggle for empire, Bombey” The History and Culture
of Indian people.5” pp.66-74.1979;

xxxiii, pp215-218,1958

iii) Jain, Kailash Chand, Malwa through Ages. From the Earliest Time to 1305 A.D. New
Delhi-1991

iv) Agrawal, V.S. Bhoja: “Samarângana sûtrakârâ” (Revised and Ed.),
Gaekward’s Oriental series, Baroda,1966,

v) Gray, Louis H. The narrative of Bhoja (Bhoja Prabandha) by Ballala of
Benaras, New Heaven, (AO 5.34) 1950

vi) Mishra, S.C. Archeological Testimony of Surunga and Mauryânism

vii) Shukla, D.N. Vâstu Śâstra. Vol-I. Lucknow (Reprint New Delhi-
1998

viii) Krishnamachariar, M. History of Classical
Sanskrit Literature (Reprint, New Delhi-2004

“Muninâm Bharatâdinam Bhojadinâm Camubhrutam/
Sastrâni samyagâlochyâ nâtyavedârtha vedinâm/”


Library madras, Sanskrit books.pt.1(A) page.405.

17. Kumar Pushpendra, SS. in introduction. New bharatiya Book corporation
Delhi, 1998


Banarsidass, Delhi, 2010
“In the end, I may touch on the pertinent problem of the sources from which it has drawn and originally it can claim. I am of the definite view that the whole work is a master piece of original contribution. Even some of the preliminary chapters (i.e. Mahadādisarga, Bhuvankoṣa and Sahadevādhihāra, etc.) through drawn from Purāṇas, are independent and original in sense that they are not reproductions. The Yantra and the Citra – machines and paintings all these portion of the work re quite original. The house architecture is its special contribution.


23. SS. in the end of all adhyāyas it is said-

“samarāṇaganaśūradhāraparānāmi vāstusāstre”

24. Agrawala, Vasudev Saran, Bhoja, “samarāṇaganaśūradhāra,


26. Pareek, on the other hand, believes that the title is derived from the fact that the treatise was compiled by Śūradhāra Samarāṇa under the patronage of Paramara king Bhojadeva of Dhāra. 2002: 16


ii) Dhavalikar, M.K. sutradhāra. in: ABORI No. 52, p. 216. 1971

30. Šāstra jñana kuśala dakṣo vāstu vidyā vivodhakhah
śūradhāro mahāprajñā sat karmasu nīrantam (APP. 50.1-14)

31. Vāstu Brahmā sansājardau visvamapayakhilam tathā” in the 2nd Adhyāya of SS.

32. SS. Adhyāya, 1,4-5&11

33. SS. Ch. 44.

Śastraṁ karma tathā prajñā silaṁ ca kriyāyānvitam
Laksyalaksnyuktārthaḥsāstrnīstho naro bhavet.
34. Ibid. Ch, 28.49.
   The different varieties of roofs are, Bhuta, Tilaka, Mandala, and kumuda.

35. **Nagaram mandiram durgam puśkaram sāmpparādhiyam**
   
   **Nivāsh sadanam sadma kṣhya khitayastathā // 18, 1.**

36. *Devipurana,ch,72,78-90. And Arthasastra,II,ch,IV.*

37. SS.Folk planning: jāti-varnādhivāsa ch.X.

38. SS.ch,39.13


40. 9th chapter of SS deals with *Hasta laksāna*-the measurement.


42. SS. 4-5. the *Vāstu* of 100 squares and *Vāstu* of 64 squares to
   camps of kings(Sibiras) villages Helmets and cities.

43. Special Credit goes to the author of this work in the respect
   that it speaks of circular *Vāstu* of 64 and 100 squares to be used in
   circular shrines .SS,Ch,XII. 13


45. *Suprabhedagama,ch.XXXI.37-39*

46. In the record itself it is, however ,stated that the Nāgara , Vesara, Drāvida,and
   Kalinga are four types, not styles, of buildings.-An inscription on the capital of a pillar in
   the Amitesvāra temple at Holal, Government of Madras,G.O.no.1260,August,1915
   Progrss report of the Assistant Superintendent for Epigraphy,Southern Circle, 1914-
   15,pp.90