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From the Mythology of *Vāstuśāstra* to the Methodology of *Vāstuvidyā*

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Abstract

The article seeks to distinguish *Vāstuvidyā* (architecture) from *Vāstu-Śāstra* (socio-cultural normative of the building construction) for reasons of epistemology. The large number of monumental structures along the length and breadth of the country embody the art and science of indigenous architecture (*Vāstu-vidyā*). This seasoned architectural knowledge/skill, inherited, improved and sustained over centuries by its practitioner communities, is largely not enshrined in any of the *Vāstu-Śāstra* texts. *Vāstu-Śāstra* is a set of Sanskrit lyrics with the prescriptions on or about houses dealing with a variety of aspects from myth to belief to appeasing deities to divine reward so on and so forth. It is true that *Vāstu-Śāstra* is a term occurring in several Sanskrit texts of early India to mean *Vāstu-vidyā* or the building science pure and simple. Nevertheless, over the years the norms of *varṇa*/*-jāti* discrimination of the *Dharmaśāstra*-s entered the *Vāstu-Śāstra* and filled it with myths and bizarre beliefs, vitiating the embedded objective knowledge of house building, namely *Vāstuvidyā*. Over time, with the progress on technical, material and economo-social fronts, two events can be traced. One is the emergence of focused communities of workers and artisans who specialize in the vocations relating to building design, architecture and construction. The second significant event is that the insights and practices of this science of construction have been documented and frozen into textual canons. These two events do not occur in succession, but occur concurrently, and interact with each other. An attempt is made here to epistemologically distinguish *Vāstu-vidyā*, the building science from *Vāstu-Śāstra* that has degenerated into factoids.

Key words: Anomaly, Controversion, Degeneration, *Vāstu-Śāstra*, *Vāstu-vidyā*, *Vaṛṇa-jāti.*

1. Introduction

The term *Vāstu-Śāstra* (hereafter *VŚ*) has been in use to denote the compendium of architectural knowledge not only of buildings and their constituents, but also of the construction of markets, towns, streets, drains, sewers, bridges, ferries, ports, wells, bath-tanks, reservoirs, dams, embankments, parks, gate ways, arches, ladders, flights of steps to hill-tops and so on. As another term for *Śilpaśāstrā* the knowledge of iconography and sculpture, *VŚ* was meant to deal with the art and craft of all artefacts like bedsteads, couches, palanquins, wardrobes, baskets, cages, nests, lamps, costumes, coiffures, crowns and ornaments. This prescriptive compendium was also to deal with matters such as the features of the ideal site, soil conditions, planning and designing besides various normative factors such as gnomonic and astrological calculations (Acharya, 1946; Shukla, 1996; Chakrabarti, 1998).

It is well known that there is a long history of architectural practices in the Indian sub-continent, an advanced phase of which goes back to the Indus Valley Civilisation of c. 3000 BC (Brown, 1956). The houses in Mohanjo-daro consisted of rooms spaced irregularly around one

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or more open courtyards, which were often paved with baked bricks. They were imposing structures. The open central space would have provided light in the absence of large windows in the external walls (Ratnagar, 2001, p.88). All that could not withstand the ravages of time are lost and consummated back in the earth. However, many monumental structures of the Buddhists and Jain monastic establishments besides the Hindu temples have survived to our times as brilliant testimonies of Indian architecture, almost entirely anterior to the extant *VŚ* texts that are dated to c.6th century AD and after. Monuments at Sanchi, Sarnath, Amaravati, Barhut, Ajanta, Ellora, Aurangabad, Bhaja, Karle, Kanheri, and Andheri are examples. These structures in stone actually indicate how accomplished was the wooden architecture, for their concepts, designs, plans, constituents and features look like facsimiles of woodwork. They remain the enduring testimony of the amazing level of perfection achieved by the architectural designers, masons, craftsmen and artisans of early India (Havell, 1915; Coomaraswamy, 1914; Brown, 1956; George, 2000). It is on the basis of these umpteen monuments the architectural knowledge of India became explicitly coded and systematised subsequently. The temple architecture of India represents the continuation of the Buddhist and Jain designs, plans, and principles as adapted to the Āgamic, brāhmaṇical cosmology, mode of worship and iconography (Benjamin, 1967).

It has been claimed that *VŚ* is an offshoot of *Atharvaveda* that is generally assigned c.800 – 500 BC (Romila Thapar, 1991). Nevertheless, the extant texts are not of that antiquity. Scholars have classified traditional Indian architecture into three schools, viz; the *nāgara*, *drāviḍa* and *vesara* with their own prescriptive texts. *Bṛhat-samhitā*, *Viśvakarma-prakāśa, Samarāngaṇa-sūtradhāra*, *Aparājita-Praccha, Rūpa-maṇḍana*, *Mayamata, Amśumad-bheda, Agastya-Sakaladhikara, Śilparatna,* and *Mānasāra* are the main texts of architecture which address the domain of knowledge called *Vāstuśāstra.* There are several late medieval regional texts in the country, as *Anka-śāstra*, *Aparājita Vāstuśāstra*, *Vāstu- tattva*, *Vāstu-nirṇaya*, *Vāstu-puruṣa-lakṣaṇa*, *Vāstu-prakāśa*, *Vāstu-pradīpa*, *Vāstu-mañjari, Vāstu-vicāra*, *Vāstu-vidhi*, *Vāstu-samgraha*, *Vāstu-sarvasva*, *Tantra-samuccaya* and *MAC* exemplify.

> *vāstujñānamathātaḥ kamalabhavān muni-paraṃparā'yātam* |
>
> *kriyate'dhunā maye'dam ….* || *Bṛhat-saṃhitā* 52.1 ||
>
> "This architectural knowledge, passed down from the Lotus-born (*Brahmā*) to the succession of sages (*muni-paraṃparā*) is now expounded by me (etc.)..." [*Bṛhat saṃhitā* 52.1].

Thus opens *VŚ* its eyes for the first time through Varāhamihira in the *Bṛhat- saṃhita* in the 6th century AD. By the period the sub-continent had witnessed the execution of many impressive architectural projects in different parts. Architectural knowledge and skill in pre-modern India had been developing as continuously inherited, improved, and sustained by the communities of artisans and craftsmen who practice it. There is the persistence of traditional practices even today, despite the massive impact of the modern architecture.

However, there is a wide gulf between the knowledge presented in the archive of the traditional *VŚ* texts, and the unsubstantiated advice being dispensed by the current 'practitioners' of *VŚ*. The lineage of texts (which is discussed ahead) constitute a body of systematized knowledge that is significantly at odds with the *VŚ* being touted in the marketplace, and these are some of the differences we attempt to highlight.

It is evident that all the earlier texts were coded and systematised on the basis of oral traditions and conventions among the artisan/ craftsmen (*karmakāra-s*) besides observations of their working as well as the concrete output.

Mānasāra seems to be the most comprehensive of all the related texts, which runs into seventy chapters dealing with the preliminaries, subject matter of architecture, sculpture and iconography. Since the text contains standardized prescriptions of the Jain, Buddhist and Brāhmaṇical architecture, sculpture and iconography, it is clear that it was compiled after several ancient monuments were built. As no grammar ever created a language, *VŚ* or for that matter *Vāstuvidyā* did not create any shelter. *VŚ* cannot claim the splendour of architectural marvels man has achieved as depicted above since *vāstujñānam* or *VŚ* came out as a revelation "from the all knowing Brahma" only after these edifices are built by the toiling hands.

2. The Textual Tradition of *VŚ*

The image we have of *VŚ* is hopelessly piecemeal, fragmented and delinked from its historical contexts. *VŚ* can only be understood meaningfully if we locate it within the matrix of allied *śāstra*-s [disciplinary domains] such as *Śilpa-śāstra* [sculpture and iconography], *Jyotiṣa-śāstra* [astronomy and astrology] and *Citra-śāstra* [painting and illustration]. Often the names *Śilpa* and *Vāstu* are used interchangeably in the classical texts.

As stated earlier, the oldest significant chapter in the *VŚ* is in the *Bṛhat saṁhitā* of Varāhamihira [6th Century AD], while there are minor discussions [or descriptions] in the two majors epics and in the *Artha Śāstra*. The *Matsya Purāṇa* enumerates a list of 18 masters of *VŚ*, abounds in names of mythological characters, but surprisingly doesn't include the historically identifiable Varāhamihira. The *Samarāṅgaṇa Sūtradhāra* attributed to Bhoja is an early and important text from the turn of the millennium, exclusively dedicated to *Śilpa* and *Vāstu*. The *Visvakarmīyam*, also known as *Vāstuvidyā* is undated, and was edited by Ganapati Shastri, as part of the Trivandrum Sanskrit series (1913) as was the Mayamatam, and these along with *Mānasāra*, *Tantrasamuccaya* [15th century approx.] and Nīlakaṇṭhan Mūsat's *Manuṣyālaya-candrikā* [16th century AD] constitute a partial list of the texts that offer authoritative source material to understand the *VŚ* in a historically meaningful and honest way.

3. Some Principal Features of *VŚ*

Some important concepts of *VŚ* need to be discussed, to understand the discipline in any measure. The current discussion relies largely on the descriptions in Nīlakaṇṭhan Mūsatt's *Manuṣyālaya-candrikā* (henceforth *MAC*). The *yoni* is a technical concept in *VŚ*, with a different one assigned to each of the eight cardinal directions, and they have names such as *dhūma*, *kukkuma* etc, and each architectural *yoni* is somewhat theomorphised, attributed a caste (*vaṛṇa*) and is said to confer certain good or bad effects on the house [*MAC* 3.32].

According to *VŚ* it is *yoni* that is considered as the *pṛāṇa* or the life of a house and therefore, one has to accept or adopt the *yoni* ordained or prescribed for each (*MAC*- 3.32).The *yoni* is identified with (the *yoni* of) four birds (*dhuma*, *kukkuma*, *khara*, and *kāka*), three animals (*simha*, *gaja*, and *vṛṣa*) and an inanimate object (*dwaja*). They are ordained as the following – *dhwaja* for Brāhmin, *simha* for Kṣatriya, *gaja* for Vaiśya and *vṛṣa* for Śūdra. This is the most important stanza of *MAC* as it deals with *prāṇa*. *Āyādi ṣadvarga* is the category next only to *yoni* in importance, which consist of *vyaya*, *āya*, *nakṣatra*, *vayas*, *tithi* and *vāra*. *Vayas* is the quotient and all others are reminders obtained on division of multiplied perimeters by certain arbitrary numbers as given below:

Vyaya (expenditure) = reminder of 3/14 of perimeter

Āya (income) = reminder of 8/12 of perimeter

Nakṣatra (star) = reminder of 8/27 of perimeter

Vayas (age) = quotient of 8/27 of perimeter

Tithi (phase of moon) = reminder of 8/30 of perimeter

Vāra (week) = reminder of 8/7 of perimeter

Then comes the site or the land slope, proposed for the construction of a house, which is to be sloped as follows: low north for Brāhmin, low east for Kṣatriya, low west for Vaiśya and low north for Śūdra. Here the 'length – width' ratio of plot has been prescribed**.** For a Brāhmin this ratio shall be 1, in other words the length and width shall be equal. Accordingly, the ratio shall be 1 1/8 for Kṣatriya, 1 1/6 for Vaiśya and 1 1/4 for Śūdra. It is prescribed that there shall be a naturally grown tree in the plot, different for each of the *varṇa*-s - *atti* (*ficus racemosa*) for a Brhmin, *arayāl* (*ficus religiosa*) for a Kṣatriya, *perāl* (*ficus macrophylla*) for a Vaiśya and *itti* (*ficus microcarpa*) for a Śūdra. Likewise, the colour of the soil at the plot proposed for the house should also vary according to the *varṇa* order: white for a Brahmin, blood colour for a Kṣatriya, yellow for a Vaiśya and black for a Śūdra. Further the grass (naturally grown) in the

BASIS	PERIMETER (MM)	IN KOLS OF 24 TO 31 AṄGULAS AND AṄGULA=30 MM (Dr Achuthan, Dr Prabhu[1])							
		24	25	26	27	28	29	30	31
Perimeter	P1=18380	25.53	24.51	23.56	22.69	21.88	21.13	20.4	19.8
Yoni	Reminder of P1x3/8	2	7	5	2	8	6	4	2
Vyaya	Reminder of P1x 3/14	7	4	1	12	10	7	5	3
	Reminder of P1x9/10	10	1	2	4	7	10	4	8
Āya	Reminder of P1x8/12	12	4	8	2	7	1	7	2
	Same as x2/3	3	1	2	3	2	3	2	1
Star	Reminder of P1x8/27	27	14	2	18	8	25	16	8
Vayas	Quotient of P1x 8/27	12	11	11	10	10	9	9	9
Tithi	Reminder of P1x8/30	24	16	8	2	25	19	13	8
	Same as x4/15	12	8	4	1	13	10	7	4
Vāra	Reminder of P1x8/7	1	7	6	7	7	1	2	4
BASIS	PERIMETER (MM)	IN KOLS OF 24 TO 31 AṄGULAS AND AṄGULA=27 MM (Dr Ashalatha)[2]							
		24	25	26	27	28	29	30	31
Perimeter	P1= 18380	28.37	27.23	26.18	25.21	24.31	23.48	22.7	22
Yoni	Reminder of P1x3/8	5	2	7	4	1	8	4	2
Vyaya	Reminder of P1x 3/14	1	12	9	6	3	14	12	10
	Reminder of P1x9/10	5	5	6	7	9	1	4	8
Āya	Reminder of P1x8/12	11	2	5	10	2	8	2	8
	Same as x2/3	3	3	1	2	1	2	3	2
Star	Reminder of P1x8/27	11	2	20	13	5	18	3	17
Vayas	Quotient of P1x 8/27	8	8	7	7	7	6	6	6
Tithi	Reminder of P1x8/30	17	8	29	22	14	8	2	26
	Same as x4/15	8	4	15	11	7	4	1	13
Vāra	Reminder of P1x8/7	3	1	6	6	5	6	7	1

[1]Engg Professors and Joint Authors of Engineering Commentary on *Manuṣālaya-candrika*.
[2]Arch Professor and Author of Traditional Architectural Forms of Malabar Coast.

plot should also vary – *kuśa* (*desmostachya bipinnata*) for a Brāhmin, *āmakūḍham* for a Kṣatriya, *kāruka* for a Vaiśya and *āmudarbha* for a Śūdra. Even the smell of the soil has to be different from *vaṛṇa* to *vaṛṇa* – the aroma of ghee for a Brāhmin, of blood for a Kṣatriya, of rice for a Vaiśya and of alcohol for a Śūdra. Similarly the taste of the soil in the site of the proposed house should be different too – sweet for a Brāhmin, *kaṣāyam* (astringent) for a Kṣatriya, sour for a Vaiśya and (pungent) hot for a Śūdra.

As regards the measuring rod to be used, there are different types of *kol* prescribed for the houses of each of the four categories of the *vaṛṇa*. Each of these rods (*kol*-s) consists of certain specified numbers of *aṅgulas* (linear measure) and has specific names. *Dhanurgṛham* (27 *aṅgula*) and *prakīṛṇam* (31) for Brāhmin, *vaipulyam* (26) and *dhanurmuṣṭi* (30) for Kṣatriya, *prajāpathyam* (25) and *vydīham* (29) for Vaiśya and *kiṣku* (24) and *prāchyam* (28) for Śūdra. There is a prescription of the type of house differing according to the *vaṛṇa*. It is mentioned as auspicious *śāla* or unit of a four-some house – *kizhakkini* (eastern unit) for a Brāhmin, *tekkini* (southern unit) for a Kṣatriya, *vaṭakkini* (northern unit) for a Vaiśya and *paṭinjārrini* (western unit) for a Śūdra.

Stanza (*MAC* 1.20) gives the effect of land slope thus: Land low in north gives wealth, east prosperity, west poverty and south death. The proposed land for house construction shall be sloping (*Manucyālaya- chandrikā* 1.31) – low north for Brāhmin, low east for Kṣatriya, low west for Vaiśya and low north for Śūdra. These two together would mean Brāhmin should be wealthy, Kshatriya should prosper, Vaiśya should suffer poverty and death warrant for Śūdra.

When the *vaṛṇa* aspect is removed, from this prescription, and low North or low East is prescribed for all as is done today a question will arise why? This is being answered with manufactured reasons - to see rising sun or to see saptaṛcis [the constellation Ursa Major]. That makes *VŚ* superstitious. Is the declared benefit of land slope true? Absolutely no, as per the very same *VŚ* (*anuloma* rule, *MAC*, 3.07) Brāhmin can use low south.

3.1 Irrational Prescriptions

The entire prescriptions are primarily *vaṛṇa* based and the central principle is that of *anuloma*. Prescription ordained for a higher *vaṛṇa* cannot be followed by the lower *vaṛṇa*. But prescription for any *vaṛṇa* can be used by the higher *vaṛṇa*. (This is one prescription that is controlling or binding all other rules). There are certain rituals prescribed as divine specifications for sanctifying the plot of land proposed for the house (*bhūmi pūja*), for selecting the *ācārya* who shall be a Brāhmin, for propitiation of gods, for *gṛhapraveśa* and for rewarding the *ācārya* and the *śilpi*-s. As part of the divine rules, certain specifications about the division of the plot into quadrants (*vīthi*-s) and for the propitiation of gods in order to secure auspicious rewards and to ward off their displeasure are prescribed.

Stanza 1.33 of *MAC* provides an ingenious test to determine whether or not the soil of the proposed site satisfies the *vaṛṇa* prescriptions. In case the *vaṛṇa* aspects like colour, smell, taste etc. of the soil are not clearly discernible, there is a prescription to test and affirm. The text advises to take a pit with one *kol* square to a depth of one *kol* in the middle of the land to be examined, place an unfired earthen vessel filled with paddy in the pit, place another earthen vessel filled with ghee upon it, place wicks in each of four directions staring from east and light the wicks. It is specified that the wicks shall be of white, red, yellow and black in colour and the direction towards which the wick is oriented shall be east, south, west and north for white, red, yellow and black respectively. The four wicks are to be lit as prescribed and after two *nāzhika* (one *nāzhika* = 24 minutes) if the white wick is still burning the land is suitable for a Brāhmin, and if it is the red wick, it is suitable for

a Kṣatriya; if it is yellow wick, it is suitable for a Vaiśya and; if it is black wick, it is suitable for a Śūdra. If all the four wicks are burning even after the stipulated duration, the land is suitable for all, and if all the four wicks cease to burn, the land is unsuitable for all.

This test is used when there is no clear evidence in colour, smell, taste of soil and self grown trees and plants in the plot to appropriate for any of the *vaṛṇa*-s this test can be used. In bigger pit, thin wicks and more oil, the wicks can outlast 24 minutes. Between 24 *aṅgula kol* and 31 *aṅgula kol* the volume and therefore the quantity of oxygen in the pit increases more than twice and surface area of the pit increases 10 fold and the wicks can draw 10 times air trapped in the soil. If only white wick is burning Brāhmin can use it and he can use the site even if any wick is burning by *anuloma* rule! 'Heads I win tails you lose'!

Even aspects of technical prescriptions are marred by irrationality. There are a number of prescriptions regarding the firmness of the ground; height of the plinth; height, size and shape of the column; sizes of the wall plate, rafter, collar pins etc., obviously technical. But all of them are of an arbitrary nature endowed with divine or of auspicious benefaction. It is random, faulty, irrelevant and invariably bizarre, with varying margins of ignorance.

Śāla with conical roof is the basic model for a house in the *Vāsuśāstrā.* It is the rafters that provide the conical form. For rafter the margin of ignorance is 18 times by size. From a single log of wood one can make one rafter or the entire requirement of rafters up to a total of 18. The margin of ignorance varies 54 times by strength. The margin against deformation is 162 times. It is the collar that braces the rafters on opposite slopes and hold rafters together in the conical form. There is no collar in *MAC*, but there is collar pin which connects the collar to the rafter!

3.2 Discrimination

Another notable feature of the *VŚ* prescriptions is discrimination. Discrimination against people of other faiths**,** discrimination against *avaṛṇa*-s, discrimination within *savaṛṇa*-s**,** and discrimination against women, are explicit in its prescriptions and specifications**.** The only stanzas dealing with woman are – one entitling her to accompany her *yajamāna* in the ceremonial *gṛhapṛaveśa*, rear children and grand children and live happily ever after and the other:

Ēka-jāti-tarubhi : prakalpitam dvāra-pāda-phalakādikam śubham |

Anyathā yadi vadhū kuśilatām sambhaveditī vadanti kecana ||

In the case of any house, it is auspicious to have all elements of its door (frame, shutters etc) made of the same wood. If not, the householder's wife will turn unfaithful, which is certain according to the *ācarya*-s. There is, however, no prescription in any of the *VŚ*-s to prevent the husband's behaviour leading to infidelity. There is no specific prescription for women, anywhere in the text and the term '*puruṣa*' (male) is not used in the plural, common and multi-lingual sense.

Yoni is reminder of perimeter in *Kol* multiplied with 3 and divided by 8. Let us consider a single room house 12′ × 15′ with concrete roof. The room as constructed actually measures in millimeters 3596 x 4542 inside and 4142 x 5068 outside. For the limited purpose of understanding the nuances of *VŚ* let us accept (without questioning at this stage) certain factors the engineering professors who are also *vāstu* pundits have accepted: *Aṅgula* is 30 mm long. Kol of 24 *aṅgula*-s is 720 mm. Perimeter P shall be outside of wall. Let us accept a two decimal accuracy and usual rounding of rule:

p=2x4132+2x5058 = 18380 mm; Or p= 18380/ 720=25.53 kol.

3/8 x p = 3/8 x 25.53 =9.57; y=0.57 x 8 = 4.56 = 5 or *panca-yoni*.

In the charts mentioned before – one with 30 millimeter per *aṅgula* and other with 27 millimeter per *aṅgula* – we find that *yoni* changes when measured with a *kol* of different number of *aṅgula*-s. The exact measure of *aṅgula* is neither 30 mm nor 27 mm. It is the combined thickness of 64 number of '*til*' seed which cannot have a definitive measure. And let the reader come to his or her conclusion as to the blackmail with the '*prāṇa*' of the house.

Just like the *yoni*, six other attributes beginning with *āya* (expenditure) - *āyādi ṣaḍvarga* are next discussed as being the features that influence the house. Similarly, the slope or cline of the terrain, the quality of the soil (taste, appearance etc.) and the grasses and trees that grow in it naturally are recommended differentially for house-owners as per their *vaṛṇa*. Even the scale of measurement (termed *kól*) is not a universal standard, but is determined by the body dimensions of the house-owner, again varying per his caste. It is not by accident that the owner is referred to as a 'him'. All the *VŚ* texts are produced with a highly patriarchal bias, and no mention is made of female inhabitants or owners of the residences.

3.3 *Vāstu* as a *Savaṛṇa* Doctrine

The *VŚ* was composed at a much later stage as its most striking feature of discriminatory specifications and prescriptions, which would exist only in a stratified society, clearly shows. In India *varṇa* and caste are suggestive of a stratified class structured society. It is clear that *VŚ* is a *savaṛṇa* doctrine that hardly matters to the lower rungs in the class structured society of *vaṛṇa-jāti* differentiation. It is at once an outcome of the *vaṛṇa-jāti* society and an instrument of its ideological reproduction and perpetuation.

Why did *VŚ* surge in the 15th century AD in the form of *Tantra-samuccaya* and in 16th century in the form of *MAC* is a relevant question. By the 15th and 16th century there were four predominant sections in India namely Buddhists, the Jains, the Hindus and the Muslims. Sufism and the *Bhakti* movements were the remarkable features in this medieval age. *Bhakti* cult was the result of the feeling of despondency of the Hindus as a result of their being on the defensive in politics, society and religion. It achieved two objectives: firstly it tried to reform Hinduism and emphasised the neglect of image worship and caste system and secondly it tried to harmonise the relation between Hindus and Muslims. The rituals and the practices of Hinduism were under severe attack. This naturally sounded the alarm bells against the *Cāturvaṛṇya* system and *Tantra-samuccaya* and *MAC* are the results. The *MAC* prescriptions of *vāstu* therefore are clearly crafted for those functioning within a rigid framework of *vaṛṇa*. There is no place for women, *avaṛṇa*-s (the casteless) and even for the adherents of the *vaṛṇa* framework; there is discrimination, in terms of quality and other criteria. The multi-religious milieu of the medieval times, must have rattled the upper classes to take more and more strident measures to assert and uphold their caste superiority, in a knee-jerk response to their dissipating numbers, given the competition posed by other '*vaṛṇa*-less' religious orders such as Jainism, Islam, Lingāyatism and the many syncretic Sufi and Bhakti cults that disregarded *vaṛṇa* distinctions.

We must step back and trace the historical development of the highly advanced sciences of painting, architecture, sculpture, carpentry, engineering and metalwork; which must have flourished in the oral-aural mode of transmission with social structures such as workers' guilds and apprenticeship programmes, and patronage from prosperous members of the stable economy. Even if there was some minor caste-fluidity, and there are occasional mentions of upper-caste individuals training as artisans or craftsmen in these domains, the bulk of the workers, teachers and artisans were from the lower *vaṛṇa*-s. When the rulers of

prosperous kingdoms and principalities decided that homegrown knowledge of the artisan *jāti*-s should be committed to texts, the intercession of the literate class became necessary, and in all likelihood, the *vaṛṇa*-based discrimination of architectural practices were enshrined in the treatises in this stage, as were oppressive features of feudalism and patriarchy.

4. Transitions in *VŚ*: Anomalies and Aberrations

There is a big temporal gap between the early texts with *VŚ* content and the later medieval digests of *VŚ* that reflect the social circumstances of their production. It may be useful for us to note some of these distinctions, since modern practice of *Vāstu* almost entirely relies on unscholarly editions of these medieval redactions. Not just is there variation in content, some materials are even contradictory between the two phases.

VŚ rests on the myth of *Vāstu-Puruṣa*, which says that once upon a time there was a troublesome *Asura* who won over all around by his physical strength, valour etc and abused the gods. Exhausted in battle he fell on the ground and yet by rolling he out-reached everywhere and caused hardships. Then men, sages and gods were overtaken by fright. When he was lying flat in face up posture with feet in the southwest and head in the northeast corner the gods all of a sudden pounced on him, turned him face down and pinned him down to the earth. All together 53 gods occupied various limbs of this *Asura*. If these gods sitting on the body of *Vāstu Puruṣa* are appeased, they will reward with the desired results. If not, they will bestow the opposite reward. That is the myth of *vāstu-puja*.

Vāstu Puruṣa spreading himself over the entire *vāstu-maṇḍala*, which forms the basic presupposition, is often applied in a self-contradictory manner. The posture of *Vāstu Puruṣa* with face upward with his legs in southwest corner and head in north east corner as in the stanza (*MAC* 2.28) defines the positions of gods pinning him down to earth. For example Janta is positioned on the left ear; Aditi on the right; Indra on left shoulder and Argala on the right. In other texts, for instance *Mānasārā* the posture of the lying *Vāstu Puruṣa* is face down. So what happens to the positions of Janta and Aditi? Their positions are inter-changed. What happens to the offering to Indra? It is wrongly given to Argala. Both Indra and Argala will become angry – Indra for no offering and Argala for wrong offering!

A central concept in *VŚ* is the idea of a spatial coordinate frame, which is constituted by the *Vāstu-Puruṣa* – a semi-divine character who lies splayed over the architectural framework of the *vāstu-maṇḍala*. This is the framework over which the blueprint of the building or residence is developed, and there is an elaborate pantheon of deities positioned in the framework with respect to the orientation of the *Vāstu-Puruṣa*. As per the *MAC*, the posture of *Vāstu-puruṣa* is face upward with his legs in southwest corner and head in north east corner of the *VM* [*MAC* 2.28]. The other divinities are arranged all over the *maṇḍala* pinning down different parts of the VP. In other texts (such as *Mānasāra*) the posture of *Vāstu-puruṣa* is face down, thereby entirely reversing and confounding the order of arrangement of the different deities, and the activities they govern.

5. The Postures of *Vāstu Puruṣa*

The deities occupying various limbs of *Vāstu Puruṣa* interchange their positions in the *maṇṇala* between the face-up and face-down postures. In *MAC* and other *VŚ* texts, the positions of deities are the same with reference to cardinal directions. If both versions are correct, the house in one would be upside down!

The *Vāstu-maṇḍala* has nine concentric layers termed *vīthi*-s. Now, what shall be the width of a *vīthi*? *MAC* specifies it as 10, 9 or 8 times the height of the male house owner (*MAC* 2.15). For

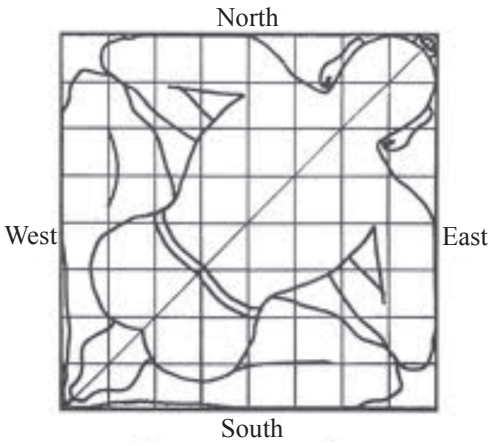

Fig. 1a. *Vāstu-Puruṣa* face down

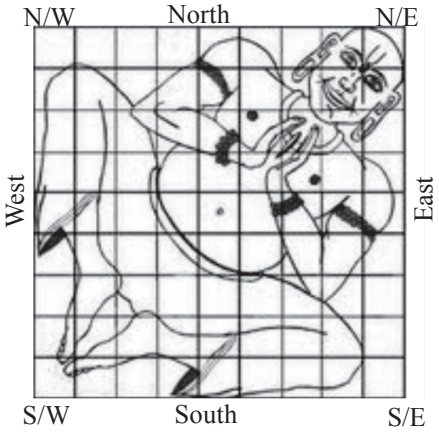

Fig. 1b. *Vāstu-Puruṣa* face up

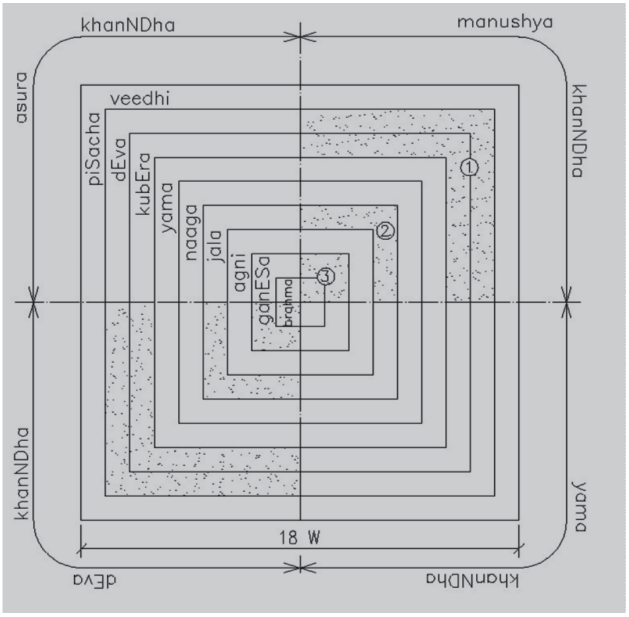

Fig. 1. *Maṇḍala*, *Khaṇḍa* and *Vīthi*

a five feet six inch tall man the minimum *vīthi* shall be 44 ft. That means the minimum width of plot shall be 18 times this width or 792 ft. The minimum size of plot will then be 792x792 (14 acres) for Brāhmin, 792x891 (16 acres) for Kṣatriya, 792x924 (17 acres) for Vaiśya and 792x990 (18 acres) for Śūdra. While this *varṇa*-based distinction is undemocratic, offensive and irrelevant in modern times, it also points to medieval notions of what were the permitted land-holdings for each caste group.

6. The Modern Reinvention

The final blow in this bout of ironies, is the percolation and successful reinvention of this modern avatar of *VŚ*. We are all witnesses to a modern resurgence of interest in the science of *VŚ*. There are many ironies and paradoxes in our avowed affiliation to such a historically unsubstantiated *VŚ*, while we are wilfully and deliberately ignoring the *Vāstu-vidyā* that we ought to take more seriously. The knowledge of the traditional craftsmen – the *Viśvakarmā*-s - the *śilpi*-s, *sthāpati*-s, *pañcakarmāra*-s or *pañcālamvāru*, the *vardhaki*-s, *sūtradhāra*-s and *takṣaka*-s have all been left to languish. There is no patronage for the architectural and design sensibilities of traditional craftsmen, and we are all selecting elements of design and construction materials that are most unsuited for Indian climes. However we are happily patronizing pseudo-sciences such as the 20th century *VŚ*, with all its baggage of superstition, feudalism, patriarchy, *varṇa* discrimination, while being blissfully unaware of it, and simultaneously espouse modern, democratic moral principles. While both the practical-oral tradition and textual tradition have been ignored, we are celebrating a spurious development that is of unsure provenance, and has sprung up *sui generis* in the last half century.

VŚ, a historical specialization of knowledge, has been co-opted into responding to the uninformed anxieties of Indian citizens, who are caught between their modern lives and homes, and the felt need for a connection to their historical-cultural roots, or a need for spiritual and supernatural solutions derived from that historical-cultural matrix. Hopefully the case studies and history will shed light on the inherent anomalies and contradictions. *VŚ* along with other exotic eastern cousins such as *feng shui* has achieved cult-status; and has gotten entrenched in the marketplace and elsewhere. It has many adherents in all aspects of professional and social life. Architects confess that an increasing section of their clientele ask for projects and blueprints that are endorsed by *vāstu* experts. The exasperation of architects in dealing with difficult pundits of *vāstu*, and the possibility of cornering another bit of the market place, has led to the inclusion of *vāstu* into the curricula of colleges and universities that teach Architecture and Design. The resonances of this phenomenon, with the instituting of graduate and post-graduate courses in Astrology need hardly be pointed out. However, the phenomenon of *vāstu* percolating into syllabi did not garner as much outrage or even public expressions of concern, as did the case of Astrology [in 2001]. Thus, because of a lack of active and involved public engagement, we see pseudo-scientific practices getting established and ratified in multiple ways – from academia, from different kinds of professionals and from the market place. The mushrooming of websites and books that offer *vāstu* solutions for everything ranging from interpersonal problems to health issues to economic difficulties serve as very effective peripheral bolsters for this charade. It doesn't help that popular media offer generous and uncritical space and attention for the cottage industry of *vāstu* practitioners, books and gadgets. Similarly instances of political personages, sportspersons and other celebrities' reliance on this modern reincarnation of *vāstu* do help augment the social value and allure of this pseudo-science. The last straw is the emergence of *vāstu* for websites – and thereby the circle is complete – the fraudulent controversion of bits of a genuine discipline moves from peddling lies in the real world to doing the same in the domain of virtual reality.

7. Conclusions

This paper attempts to depict a historically grounded picture of *Vāstu–vidyā* as a pre-modern knowledge schema, and presents the distortions and contradictions between the traditional knowledge of *Vāstu-vidyā* which may have a few valid insights to offer us in terms of general architectural principles, and the modern avatar of '*VŚ* which is an ethically dubious combination of ancient principles with recent distortions. Its purport is to show how over the years the norms of *vaṛṇa*/*-jāti* discrimination of the *Dharmaśāstra*-s entered the practice of architecture in traditional India and filled it with myths and bizarre beliefs, vitiating the embedded objective knowledge. The result was the making of several prescriptive texts in *VŚ*, which helped the protection of the *vaṛṇa-jāti* system norms. The modern *vāstu* pundits using the terms, *Vāstuvidyā*, *VŚ* and *Taccuśāstrā* interchangeably and letting the architectural knowledge lost in superstitions and factoids think that *VŚ* minus its prescriptions based on caste discrimination is architecture pure and simple. This would mean that democratization of the ideal prescribed for the Brāhmins could retrieve the real rational knowledge. By prescribing slopes ordained for Brāhmin to all, how can one retrieve architectural knowledge out of *VŚ* that ascribes *vāstudoṣa* to the practice? It can only retain explanations like 'east low' enables to see the rising sun, 'north low' enables to see Saptarṣis and various others, which are bizarre. It is epistemologically valid explanations to what building problems a technology resolves and how, which constitute knowledge in architecture! It is abundantly there

in *Vāstuvidyā* that remains embedded in umpteen monuments and ongoing practices, but hardly in the modern phenomenon of *VŚ*. The onus of recuperating the historical pertinent and meaningful elements of this ancient architectural science is on Sanskritists, historians of architecture and historians of science. This can be accomplished by producing good quality scholarly editions of the texts, and compiling the material that represents the utilitarian knowledge of the craftsmen from the past, while tracing the convergences in text and practice from early to medieval times, and then verifying if there is at all anything in common with the *VŚ* of the modern 'practitioners' and the knowledge system enshrined in the texts, as well as in the historical monuments that are enduring testimonies to the *Vāstu-vidyā* knowledge of our past masters.

Bibliography

Acharya P.K. *An Encyclopaedia of Hindu Iconography*, Oxford University Press, New Delhi, 1946

Brown, Percy. *Indian Architecture* (*Buddhist and Hindu*), 2nd edn., Tobey Press, UK, 1956

Chakrabarti, Vibhuti. *Indian Architectural Theory*: *Contemporary Uses of Vāstu Vidyā*, Routledge, New Delhi, 1988

Havell, E.B. *The Ancient and Medieval Indian Architecture of India*: *A Study of Indo-Aryan Civilisation*, John Murray, London, 1915

Coomaraswamy, Ananda, K. *Viśvakarmā*: *Examples of Indian Architecture*, *Sculpture*, *Painting*, *Handicraft*, London, 1914

Michell, George. *Hindu Art and Architecture,* Thames and Hudson, London and New York, 2000.

Moossath, Neelakandan, T and C. Narayanan Namboothiri. *Manucyālaya-candrika*, D.C. Books, Kottayam, 2007

Prabhu, Balagopal, T.S and A. Achyuthan, *A text Book of Vāstuvidyā*, Vāstuvidyāpratiṣṭhānam, Kozhikode, New edn. 2011.

Prabhu, Balagopal, T.S and Achyuthan, A.. *Manusyalaya-candrika* : *An Engineering Commentary*, New edn. Vastuvidyapratisthanam, Kozhikode, New edn. 2011.

Puri, B.B. *Applied Vastu Shastra Vaibhavam in Modern Architecture*, Vastu Gyan Publication, Delhi, 1997.

Ratnagar, Shereen F. *Understanding Harappa* : *Civilization in the Greater Indus Valley*, Tulika, New Delhi, 2001

Rowland, Benjamin. *The Art and Architecture of India: Buddhist, Hindu, Jain.* 3rd ed. Penguin, Baltimore, 1967.

Shukla, D.N. *Vastu-Sastra: Hindu Science of Architecture*, Munshiram Manoharial Publishers, New Delhi, 1993

Thampuran, Ashalatha. *Traditional Architectural Forms of Malabar Coast*, Vāstuvidyāpratiṣṭhānam Academic Centre, Kozhikode, 2001

Thapar, Romila. Archaeology and Language at the Roots of Ancient India, *Journal of the Asiatic Society of Bombay*, Vol. 64-66 1989-1991.

Kramrisch, Stella, and Burnier, Raymond. *The Hindu Temple*, Motilal Banarsidass Publishers, 1976, p 269.

Sarkar, Benoy Kumar. *The positive background of Hindu sociology: Introduction to Hindu positivism*. Allahabad, Panini Office, 1937. AMS Press, 1974. Pp 439-444

Sastry, T. Ganapathy. *Samarāngaṇa-Sūtradhārā*. Trivandrum Oriental Series, Trivandrum, 1924.