

VEDIC VAASTUSHAstra A SCIENTIFIC APPROACH

Ar. Pratik Purkar¹, Ar. Anjali V. Narad² and Ar. Pooja Kothalkar³

¹Assistant Professor, Radhikatai Pandav Institute of Architecture, Dighori Naka, Nagpur

²Assistant Professor, Radhikatai Pandav Institute of Architecture, Dighori Naka, Nagpur

³Assistant Professor, Radhikatai Pandav Institute of Architecture, Dighori Naka, Nagpur

E-mail: ¹pratikppurkar@gmail.com, ²abhasme3@gmail.com, ²ar.anjali616@gmail.com, ³puja.kothalkar58@gmail.com

Abstract—Vaastu shastra as one of the most ancient Architectural belief systems, like other Traditional Architectural Sciences such as Feng Shui, also deals with the principles designed to make the most use of the environment and more specifically climate as one of its dominant factors. Based on the knowledge of the solar radiation, the Earth's Magnetic fields and the Geopathic Zones, many rules have been legislated in ancient Indian architecture dealing with environmental criteria that are now considered superstitions; however, applying them may be useful in designing buildings in complete harmony with the surrounding nature. Ancient sciences of architecture are basically a combination of rules and rituals being applied by the master builders or the local artisans. Although these rules were applied in almost every traditional culture which is also evident in their ritual behavior and folklore literature, there are few written architectural guidelines remained today which Vaastu shastra is one of them (Olivier, Paul 1997) In this paper, an ancient Indian philosophy of architecture (Vedic Vaastushastra) is explained and compared to the work of contemporary philosophers of technology. The knowledge of Vaastu shastra is cognitively understood as the concept of instrumental understanding, sense-understanding, theoretical and scientific understanding that describes its own philosophical study. In addition, we will try to list down various principals used in Vedic Vaastushastra elaboration with modern techniques use in Architecture.

Keyword: Vaastu-Shastra, Geopathic Zone, Resurgence, Vaastu Purusha, Vaastupurushmandala

INTRODUCTION

Vaastu shastra is an ancient Indian knowledge of the art and science of Architecture as formulated in prehistoric times through the early modern period. Knowledge of Vaastu shastra is believed in Indian thought to have been passed down orally over thousands of years. Human beings have passed this knowledge down through the generations, with some modifications along the way to make it consistent with the needs of the time. Originally Vaastu Shastra was conceived of as art only, but in more recent decades (since 1960) at present stage Vaastu shastra emerges again as a new fashion and style in Indian Architecture. Today's a lot is being written and discussed about Vaastu Shastra, specially its validity and scientific base. Vaastu shastra is a science of past, if it is so then it must prove its results with reasons because science demands explanation and reason. Architect and interior

designer should essentially conscious about Vaastushastra and take it by scientific way. For this, detail study is required which resulting and laid down some guidelines for design.

BRIEF HISTORY OF VAASTUSHAstra

Word Vaastu-Shastra includes Vaastu + Shastra which means science or technology of designing and constructing building, dwelling. It is an ancient Hindu practice to construct buildings in harmony with natural forces. It is the admixture of science, art, astronomy, astrology, and mystic doctrine. This ancient Indian knowledge of architecture is as old as the Vedas, which belong to the period of 1500-1000 BC. The first textual evidence for Vaastu Shastra is found in the Rig Veda, where the protector of the house (Vastupati) is invoked (Rig Veda, VII. 54.1). Most of the materials from the sixth century BC to the sixth century AD have been lost and only fragmentary portions appear in the later works of Vaastu Vidya (Bhattacharya, 1986, pp. 129, 138). The two streams of Vaastu shastra, the Nagara and the Dravida Schools, imitate one another in many fundamental features and point to their common indigenous development within the Indian subcontinent (Bhattacharya, 1986, pp. 144, 148).

The principal source for Vaastu-Shastra within the Vedas is the Sthapatya Veda which deals explicitly with Architecture in subordination to the larger Atharva Veda. Vedic knowledge such as that contained within the Vaastu was preserved through hearing, memorizing, and through the written texts themselves. Vaastu Shastra can be considered to be an applied science approach that evolved continuously over a period of at least 2500 years, producing a large number of texts like "Kashyapa Shilpa Shastra, Brihat Samhita, Viswakarma Vaastu Shastra, Samarangana Sutradhara, Vishu Dharm odhare, Purana Manjari, Mayamata, Aparajitapccha, Silparatna Vaastu Shastra, etc. Some of the great sages, originators, teachers and preachers of Vaastu Shastra are Brahma, Narada, Brihaspati, Bhrigu, Vasistha, Vishwakarma, Maya, Kumara, Anirudha, Bhoja, Sukra and others" (Rao, 1995, pp. xi-xii). All Indian temples, have lies, palaces and Wadas and Buddhist chaityas, viharas were constructed as per Vaastu shastra. The Indus valley

civilization is the only evidence of town planning as per the norms and guidelines by Vaastu shastra.

RESURGENCE OF VASTU SHAstra

Today's a lot is being written and discussed about Vast shastra, it is like a fashion in Indian Architecture, people demanding their houses as per Vaastu principles and guidelines. This is because of superstitions or the lack of knowledge about Vaastu Shastra, but it is true the whole efforts are taken only for the relief and peace of mind in today's fast and painful life. For this many people refers cheap books of Vaastu Shastra available in market or consult self calling Vaastu experts, they change their houses or offices as per wrong suggestions which give no results. This is defamatory for Vaastu Shastra.

There is another group of people well-known as a scientist, according to them Vaastu Shastra is a baseless, unscientific thing. If this is not true, then Vaastu shastra should also prove its principles through practical scientific tests and experiments because science always demands explanations and results. But these scientists forget that the modern science is also unable to answer many questions in nature, old theories are replaced by new, with new research. For example – Recently one experiment is successful in which velocity of light increased three hundred times more than that of its original, by just changing the form of light. (L J Wang et al 2000 Nature 406 277) If this experiment succeeds completely then Einstein's equation will no value in future, it may be replaced. This proved that there are many fields of science which required more research and developments, if we are talking about modern physics it is in preliminary stage opposite to this ancient Indian book highlighted many Scientific things which we can't imagine, and we are still unknown about those. Need is to only study them and understand.

Today's a picture is painted that the Indian Rishi and Munis were performing the rituals and always busy in worshipping gods, but it is not wrong if we call them scientists, before Copernicus explain his theory of solar system, Indians were know the positions of stars, planets and there motion, orbit of motion, angles and it's results, etc. like this the knowledge of another fields were also at the extreme points, in which the Music – Samaveda, Medicine – Ayurveda, Vastushastra – Atharvaveda, Astrology – Atharvaveda. Similarly, Tantrashastra, Atmashastra etc. were the main fields.

Indians had this abundant knowledge but unluckily we are unknown to this, only because this was not in written form, as it was memorized by person or in symbolic form, aiming to avoid the misuse, this knowledge was given to only reliable and eligible, responsible persos. Otherwise this knowledge ends with that person. If the learner acquired this knowledge with errors and he give this to someone without any correction and further research and if this chain will continue for a long time, then the loss of knowledge will occur essentially. This may be reason for the lost of many ancient Indian field of

knowledge's; similarly, if we lost Vaastu-Shastra in future we can give the same reason. So, it is necessary to study the Vaastu-Shastra by modern scientific way to understand the message from this.

VASTUPURUSHA

Vast shastra came in to existence during Maurya period in India. There goes an ancient story about vast shastra, that, once upon a time a man obstructed the earth and the sky with his huge body. The devatas suddenly caught the person and threw him below with his face down, and which part of the body of the person was held by different devatas, the devatas became presiding deities of that part of body. Brahma the creator was give the privilege to become "god of the house", i.e. vastu purusha.

VASTUPURUSHAMANDALA

The uses of "grid" or a "map" are examples of how particular cultural constructs have helped to frame our reality in certain spatial forms, which is identical to one of most important principles of Vaastu-Shastra known as Vaastu-Purusha-Mandala which comes under the Site Planning. It is a diagram of square grid or a map used for planning site. VaastuPurusha is a form of man in a calculated site, characterized by the symbols of zodiac signs, constellations and planets that represent the entire solar system and make the site, house, palace, village, and city etc. a micro-cosmic aspect of the macro-cosmic Purusha or VaastuPurusha. As a rule its shape is square, which is the fundamental form of Indian architecture. The square form of Vaastu-Purusha can be converted into a triangle; hexagon, octagon and circle of equal area and retain its symbolism. Once the orientation of the site is established, Vaastu Purusha Mandala or the ground plan is superimposed on the site. Vaastu Purusha Mandala is considered a model of the Universe and provides the basis for architectural design. It is a metaphorical expression of the plan of the Universe and depicts the link between people, buildings and nature. Here Vaastu means environment, site or a building.

As a concept, it extends to include a village, town, a country or indeed the whole earth in all its manifestations. When a building is in a perfect state or order, it is viewed as Purusha, the 'man' of the universe, representing pure energy, soul or consciousness; a kind of creative intelligence in the universe. Mandala means an astrological chart or a diagram. It relates to orientation because the earth is essentially demarcated by sunrise and sunset, by east and west, north and south. It has been so universal that it could be applied to an altar, a temple, a house, a city or the entire cosmos (Kramrisch, 1976 & Shukla, 1993).

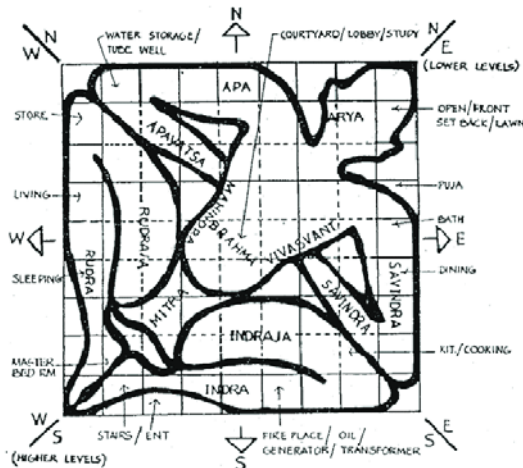


Fig. 1: The Vaastu-Purusha-Mandala is the clearest model of the Universe and provides the basis for architectural design. Vaastu Purusha Mandala is an important factor in constructing building. As a rule, its shape is square, which is the fundamental form of Hindu architecture. The grid-square form of Vaastu-Purusha can be converted into triangle; hexagon, octagon and circle of equal area and retain its symbolism.

It is believed that the plot is divided into nine parts and there are nine gods who are responsible for all this respective place, it is known as Vaastu purusha mandala. It gives detail information about direction, governing deities of that direction and effect they cause, by which the orientations of rooms or spaces are decided.

Chart No- 1 Shows Placement of Activities According To Direction

Directions	Name of god	Effect	Spaces
North	Kuber	Wealth and prosperity	Living room, seating, office, entrance.
North-east	Ishwar	Religion and trinity	Pooja room, well, u.g water tank.(Slope of plot)
East	Indra	Progress and growth	Entrance, guestroom., verandah, bathroom.
South-east	Agni	Energy, vigor and strength	Kitchen, generator, power supply.
South	Yama	Death	Back yard, kitchen garden.
South-west	Nairut demon	Purity and cleanliness	W/c, toilet, septictank, washing area, (heaviest part of house)
West	Varun	Water	Over head tank, study room.
North-west	Vayu	Air/wind	Bedroom.
Above	Brahma	Spiritual knowledge	Courtyard.
Below	Ananta	Resources, Worldly pleasure	Basement.

BASIC NORMS OF VASTUSHATRA

The basic norms of Vaastu shastra were formed keeping in view the effect of cosmic forces and different forms of energies. These forces influenced on our earth therefore the basic of Vaastu shastra rest on following-

VAASTUSHASTRA AND COSMIC FORCE

The cosmic forces are generalized term. It includes all the five elements called ‘Pancha mahabhutas’ such as

- 1) Vayu I.E. Air
- 2) Prithvi I.E. Earth
- 3) Agni I.E. Fire
- 4) Jala I.E. Water
- 5) Akash I.E. Space

Every mass on the earth and whole universe is made out of these five elements, human body and his house is also made out of the same, at that way the human being is compared with the house i.e. Vaastu purusha.

VAASTUSHASTRA AND ENERGY

We are living in unsteady universe, which is continuously moving, for which it requires lot of energy. This energy ties every material in universe with each other in form of forces. Similarly, man on earth tied with nature and nature intern with the different energies and forces, which influence on earth. Such as-

1. Solar radiation
2. Magnetic field of earth
3. Gravitational force
4. Intensity and direction of wind

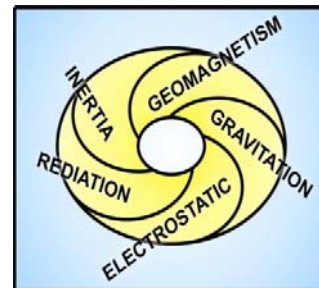


Fig. 2: Energy ties every material in universe with each other in form of various forces

Every material in the universe radiates some energy at its own specific frequencies. Also, these forces and energies influenced on earth individually or by combining with each other.

Energies and forces influence on earth individually or by combining with each other forming energy envelope and web of energy.

CONTENTS OF VASTUSHASTRA

The basic of Vaastu shastra is what should be placed where, so it deals with-Selection of site, open space in relation with built-up, orientation of entrances, location of bedrooms, kitchen, pooja room, storeroom, study room etc. Number and placement of door and windows, plantation around the building. Vaastu shastra is the time-tested science. Because science as such is rational, it must provide satisfactory answers to many questions. Therefore, Vaastu shastra is the result of physical, climatological, and social influence on design of buildings to suit the contemporary situation at that time. It can be said that Vaastu shastra is the after effect of any planning then lay on emphasis on the adaptation of these principles for present tense. A good Vaastu is accumulated by the correct orientation and placement of spaces for activities relative to the cardinal directions i.e. north, south, east, west. In today's context we found out the modern technology and control over the natural aspects. And therefore, a question arises whether Vaastu shastra is applicable in today's context or not? The answer is contradictory other thing first we see some facts based on beneficial application of Vaastu principles.

CASE 1: DIRECTION

There are four major directions, in India we have specific four minor directions and sides, Up & Down, NS, SW, NE and SE and they have specific name also i.e.

NE - Ishanya , NW – Vayavya, SW – Nairitya, SE – Agneya, Above –Urdhwa, Below- Adhar,

According to this if we place the rooms such as SE - kitchen, SW – disposal i.e.site

toilets, NW – bedroom, NE – worship i.e. pooja room etc. and main entrance from east direction it is good because, east direction is the gateway of sunrays being a rich source of vitamin 'D', and from east emitting more light and less heat which is best so also, doors and windows in the east direction **allow** the rays penetrate in to the house bestowing their Benefits to the inmates of the house. Vaastupurushmandala this principle of placing rooms in specific direction is applied at present day also, which is right.

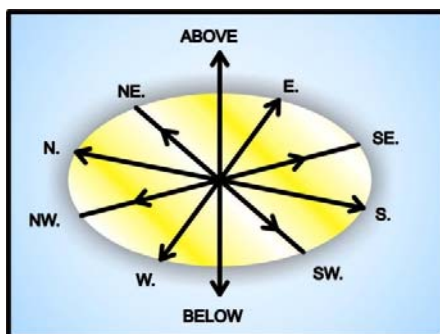


Fig. 3: Ten directional periphery

CASE 2: MASSIVE WEST, SOUTH - WEST

As the sun moves from east to west directions, in the afternoon the heat increases emitting infrared rays, which are harmful, and therefore a smaller number of windows and thick walls in the rooms in west and south-west prevent radiation to some extent. Vaastu shastra suggests keeping south west tallest so that it cast shadow over the house, keeping it cooler.

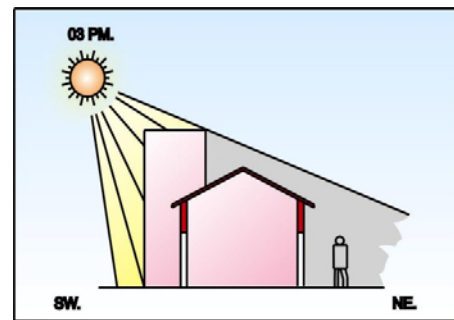


Fig. 4: placement of taller and massive structure at south and south west to cast shadow on main building

CASE 3: DIAGONALLY OPPOSITE BEDROOM & KITCHEN

North-west is the main wind direction in Indian context, and south-west is diagonally opposite to the main wind direction. South-west is named as agneya, which is right place of kitchen. If some accidents happen in kitchen like fire, wind discourages the spread of fire as it is opposite to wind direction and helps for driving odor and gases from kitchen to outside. This should be considered even by the modern design methods

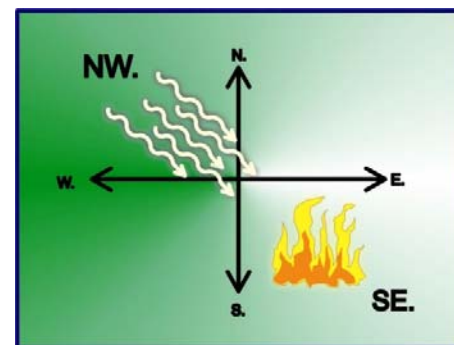


Fig. 5: North West wind and fireplace

CASE 4: SLEEPING POSITION

The foundation principle of Vaastu shastra is on the sun radiation and earth's magnetic field between north and south poles of earth affects bio-organisms. Human body the itself act as a magnet with the head, the heaviest and important part of body as North. While sleeping if head is directed towards the north the N- pole of earth and that of human body repel each other effecting blood circulation.

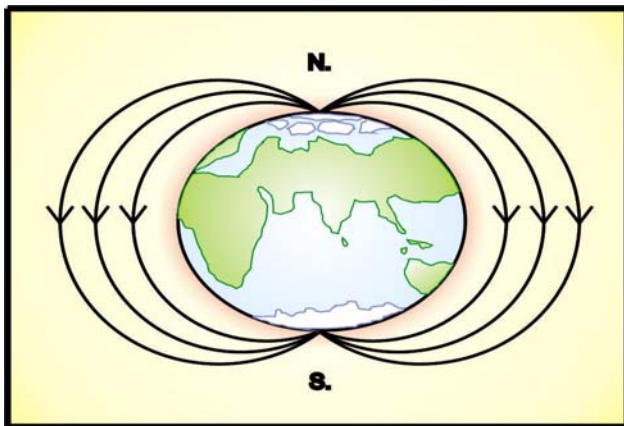


Fig. 6: magnetic field of earth and its direction

CASE 5: PLANTATION

Big trees should not be grown on east and North-east side of the plot, because they prevent the morning sunrays from entering the house. It should be south, south-west; south-east side because late afternoons at a low altitude angle trees gives their best performance.

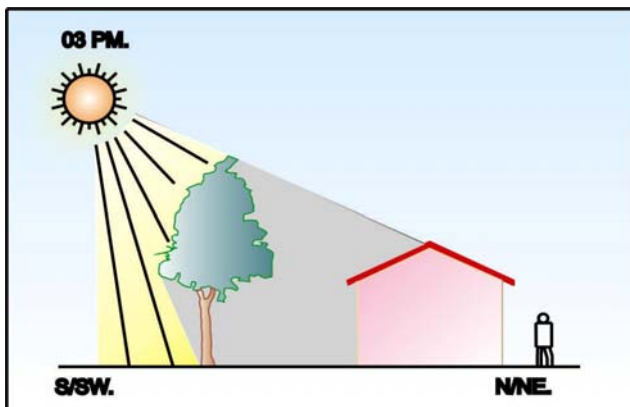


Fig. 7: Role of trees as shading devices

CASE 6: MAIN ENTRANCE

Main entrance should be located at east primarily or at north. Only for avoiding the entry of hot and ultraviolet radiation during evening, same time it provides shade and cool surrounding nearby entrance giving relaxation from outer hot to cooler interior to comers to adjust his body temperature.

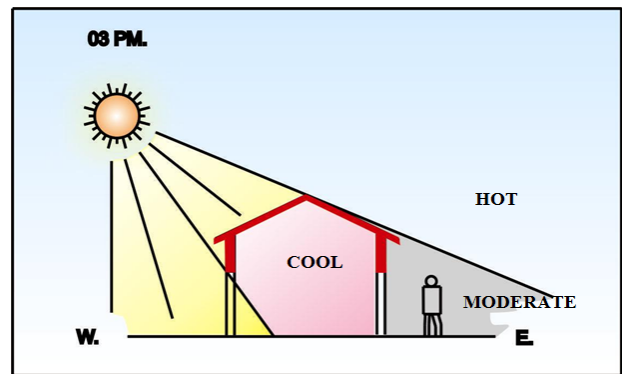


Fig. 8: Moderate Temperature Pace

CONCLUSION :

Vastushastra is an ancient indian science dealing with construction technology and techniques, for building environment friendly dwellings, which are in harmony with nature, cosmic forces and the universe. There is nothing wrong in learning and adapting principles from past. so accept those principles which yield to reasons and logic and are based on cause and effect relationship.

Vastushastra reflect many of the modern concepts from the field of modern physics, climatology, geogrophy, bio-physics, bio-chemistry etc. some drawbacks observed in logical explanation of vastushastra principles, but the whole process can not be termed unscientific, just because it is beyond the grasp of modern science. Vaastu-Shastra remains a viable and powerful way to meld science and technology within the context of design to create environments for human beings that are in harmony with nature, cosmic forces, and the universe. Vaastushastrsa aims at insuring the health, happiness, prosperity, and well-being of human being occupying the dwelling, and endows him with a sustaind peace and tranquility of mind.

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