

LESSONS FROM VEDIC BUILDING SCIENCE AND CONTEMPORARY EXAMPLES IN INDIA

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Abstract : This paper discusses vastu shastra (a traditional Indian understanding of architecture) in combination to the ideology of ecological development. This paper informed the problems occurred in urbanization and today's overpopulated cities. This paper draw attention towards possible sustainable ways of vastu shastra .This paper discussed the designed formed of settlements of India and explored the possible ideas for creating an living environment which is self-sustain, balanced economically, and stimulated culturally. it also explain the ideas and designing concept which is generally used traditionally related though its culture ,heritage and sustainability of forest in there urbanization and the way to use elements within development sustainably. further, in this paper the fundamental principle , vastu related to urbanization , vastu – pursha mandala and detailed history which discussed on the philosophy, social aspects. At last the aspects of sustainable development and vastu shastra been merge and related and redefine the new ideas to the present human settlement planning.India have many olden tradition and ideas which is are beyond its era .like, vastu shastra, construction technology, architectural treaties which are established with futuristic ideology and principle which govern sustainable aspects of planning and construction process of design, in this paper the major aspects of vastu shastra is generally used in urbanization but it can also use in residential building and spaces. These principles are aimed towards the sustainable built environment, which is comfortable for the inhabitants, which extract maximum benefits and wellbeing of living being as well as environment in the single way.

Index Terms – Sustainable, Vastu-shastra, Architecture, Environmental issues

INTRODUCTION

In this futuristic changing world where technology is meant to be an most important thing .The world where Tradition are slowly erased from the mind of people and new methods and technology takes place rapidly which decreases the inner stability of earth day by day. A serious consideration about the sustainable philosophy which can change the world of architectural aspects of designing, without effecting the environment ecologically and socially. Here the Vedic knowledge vastu shastra (an ancient Indian tradition) aspects and principle are related with the principle of sustainable environment. Where, vastu shastra is a vast and ancient science of living. Where the word vastu is derived from the root 'vas' which means 'to reside like many of our tradition. Whereas vastu has been neglected over many years because of that present society could not very much appreciate and utilize this science in their residential construction purpose. Which is leading to illness and disorder. Vastu shastra is always known as science of architecture. Vastu shastra is one of the oldest Indian ideology based science which is established in early six thousand years.

'Vastu is the skill of present in coordination with the space, such that one originates the greatest profits and wealth from being in perfect symmetry with Environment. Vastu Shastra is an extremely advanced method of making a living space which is a small model of the space as apparent by the Vedas. It is about identical the elements of the cosmic space, about bringing the great sentinels of cosmic directions into our space, about creating harmony by creating a living environment where the powers of nature are stable and at harmony with each other". The philosophic and scientific nature of Vastu Shastra was fixed since the early times and had an importance in the Indian philosophy. For periods, Indian people trusted on Vastu Shastra to plan cities and settlements, builds homes, temples, and palaces. Archeologically, it has had unlimited impact towards the sustainable design and urban planning of many cities that still show even today.

The great and ethical nature of Vastu Shastra was well-known since the ancient surroundings and had a remarkable importance in the Indian technique for living. For a extensive interval of time Indian characters rest on on Vastu Shastra to plan urban societies and civilization ideas homes reserves and palaces Archaeologically it has had strange promise towards the environmental plan and urban arranging of several urban communities that Still succeed even today Taking survived hundreds of years of economic governmental and social changes, in Indian culture and tradition. The recommendations and preparation for residential building of contemporary world has been associated with ideologies of vastu shastra.

Table 1: List of Traditional Indian Architectural Texts

S.No	Text	Period	Region
1.	Rig, Yajur and Atharva Veda	17th Cent. BCE - 12th Cent. BCE	Kuru
2.	Agamas	12th Cent. BCE	South India
3.	Brahmanas and Sutras	7th Cent. BCE	North India
4.	Artha Sastra	4th Cent. BCE	North India

IDEOLOGIES AND PRINCIPLES OF VASTU SHASTRA-

Vastu Shastra, the beneath assembly of any plan concept developed out from a metaphysical structure of the phenomena of Existence, Space and Time. The occurrence of Presence is supported by the idea that all effects and their presence are interconnected. So, the existence of one disturbs the other. The occurrence of Space is abstracted as a active element made of energy units, where in the main goal is to form an atmosphere that is in agreement with this refined liveliness; and lastly, the knowledge of Period with reverence to universe and social life have been explained to unite all procedures and actions of the universe. Based on these philosophies, the constructed method was planned to be in coordination with the powers of the world.

The contact between the three simple occurrences of Presence, Universe and Period were also careful to be totally fixed in the method of natural life and decent standards of the Indian people. According to Parikh every deed of the persons exposes their answer to the Hindu idea built on the communication of these simple occurrences.

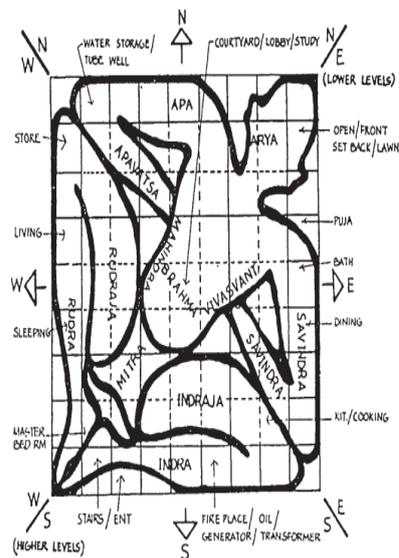


Figure 1. Vastu-Purusha-Mandala

This makes it perfect that the spatial structural ideologies of Vastu Shastra safeguarded that the plan of fleshly spaces responded to the cultural values of Indian civilization and tradition. and way of life of the people. Through literature and experts, it can be gathered that, these spatial organizational principles, based on the interaction of the three phenomena, can be expressed through four key concepts; that informed layout and consequently, the structure of cities. Conjunction of frameworks and relative wholeness: Stemming from the individual character of the basic belief systems and their consistent congruity, Vastu trusts that the parts of the physical condition additionally should be finished substances in their unique situation; making singular focuses in continuum wherein each middle is characterized by a few other sub-focuses. This again contains littler sub-focuses, each associated with each other keeping in mind the end goal to mirror the request of the universe. Consequently, network and relative wholeness end up plainly one of its authoritative standards and was connected by the utilization of Vastu Purusha Mandala³ (Figure 1a).

Independence inside a gathering: As much as all types of presence and space can be comprehended as far as an arrangement of concentric wholes, focuses and sub-focuses, each of them have a level of centeredness; inferring autonomous personalities. „They have their own directing frameworks and particular attributes that are not quite the same as others and make an individual statement“ (Parikh, 2008, p.55). However, regardless of how particular, every component shapes a piece of each other.

The hidden significance as far as Vastu Shastra along these lines suggests how singular structures or parts of a bigger city, despite the fact that having a free personality, need to exist together congruously so as to add to the general more prominent character of the town or city; making it another of its key authoritative principles Coexistence of extremes and festivity of crossroads: All originations of Space and Existence depend on the standard of bipolar indication, wherein the extremes are thought to be only unique parts of a similar wonder, working in an intercommunicative solidarity and shaping a continuum after some time. One is subject to the next for its reality and adequacy. Keeping up a harmony between the extremes was viewed as pivotal for all parts of life, including fabricated shape. Since Space was accepted to be made of vitality, this concurrence identified with the five sorts of energies to be specific, ether, air fire, water and earth - the „Panchbhootas“

APPLICATION OF VASTHU SASTRA IN MODERN ARCHITECTURE –

The principles of Vasthu associate the tenant of the Vasthu home with sensitive laws of nature, for example, the vitality lattice of the earth, great earth energies and regular protest energies from the sun. They additionally fit the home with the five barometrical states of earth, water, fire, air and space. Vasthu Sastra is of the idea that home ought to be arranged in a way with the end goal that positive powers supersede negative powers, which prompts an idealistic common question field. The immense structures of Vedic.

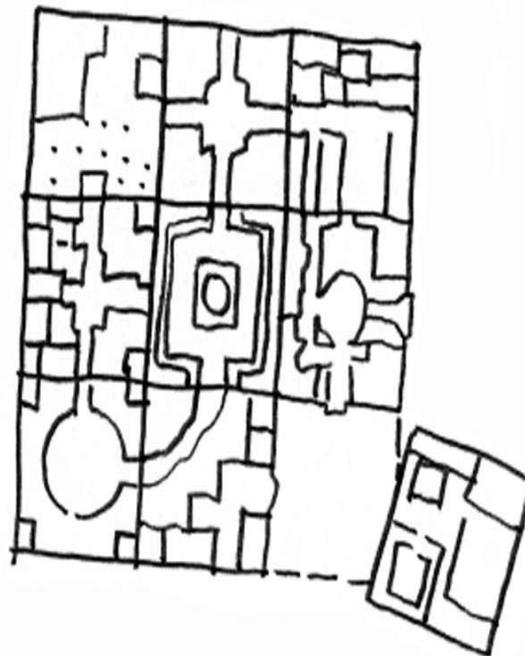
Exploration of design remains on the accompanying five essential standards:

- Diknirnaya: The reasoning of Orientation.
- Vasthu-Pada-vinyaasa: Site arranging; The Vasthu Purusha Pattern.
- Maana: Hastalakshana: the relative estimation of structures.
- Aayaadi-Sadvarga: The six ordinances of Vedic subject.
- Pataakaadi-Sadschandas: The nature of the building, its viewpoint and prospect and so on. Vasthu can be said to be by and by in all towns and in numerous homes in urban in any event for nostalgic conviction without knowing logical reasons.

Structures built and in honest to goodness require like better air development inside can be altered. Endeavors can be taken to incorporate at least a portion of the great things in Vasthu with logical reinforcement to the present building intending to get approved by the administration for the advancement of general society.

JAWAHAR KALA KENDRA -- A CASE STUDY

Jawahar Kala Kendra is a museum of arts and crafts located at Jaipur, India and built in 1986-91, launched by the government of India to communicate India's cultural and spiritual values and to display its rich craft heritage. The geometry of the layout plan is derived from traditional Hindu architecture based on self-similar squares (Mandalas) derived from ancient Hindu texts (Vedic Shastras) dating back to 1500-500 BC. These squares are the abstraction of cosmos in geometrical form where architecture is perceived as a bridge between cosmos and man - the model of "cosmic man" (Vastupurusha Mandala).



Jawahar Kala Kenrda's plan based on the 9 square mandala

APPLICATION OF VASTHU SASTRA IN URBAN PLANNING –

In Hindu writing where the connection between the Mandala and urban arranging is investigated, it is proposed that the hallowed geometry of the Mandala is fundamental to build up a safe claim inside a dynamic scene.

The ideal condition as per Vastu is one where there is an adjust of the considerable number of energies improving common presence. This unification of connections between extremes in the fabricated condition naturally puts a considerable measure of significance to the outline of advances, points and edges. Agelessness of room: according to the specialists, Vastu has confidence in the idea of multi-layering of Time reflected in the Space as changes inside a spatial edge, where the „resultant space advances its free character however conveying the shadows of the first one This finishes up versatility of room with layering of time as one of the authoritative standards. This guideline works in conjunction with the Vastu conviction of being touchy to the characteristic setting and utilizing the assets of the zone economically so as to be tuned in to the space time continuum.

CASE STUDY (CHANDIGARH)

The philosophy of *Vaastu Shastra*, based on time-tested scriptures and guidelines, works on the principle that correct placement of various activities in the right direction and in suitable zones under the influence of respective planets is bound to bring happiness, prosperity and peace of mind. The philosophy applies to any kind of architectural development, emphasizing the relationship between humans and nature.

The industrial area, according to *Vaastu*, is suitably located in the southeast belt, governed by *Agni*, which symbolizes fire; in the case of industry, *Agni* (fire) symbolizes the use of electricity, energy, power.

Lastly, according to *Vaastu*, the south and west directions are favourable places for living purposes. Thus, residential buildings are located in the southwest, south and west zones of the city.

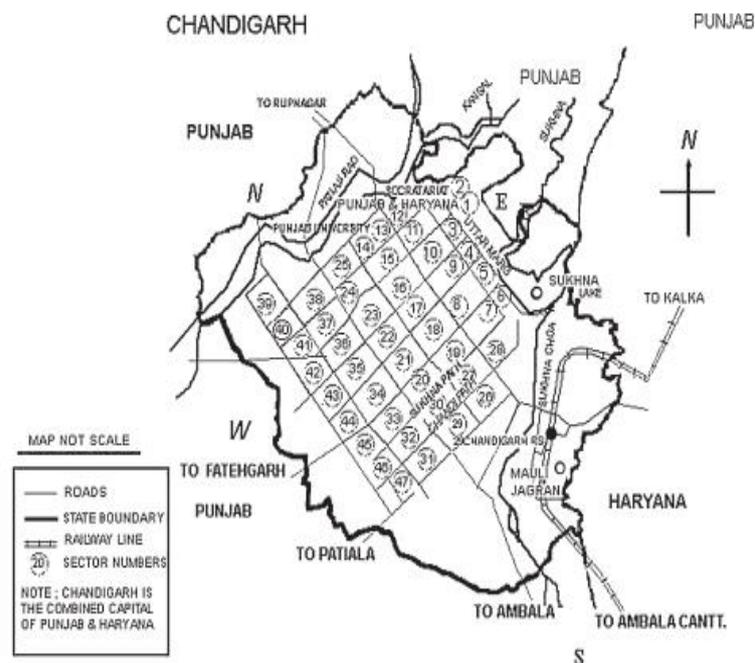


Figure 2. The Chandigarh master-plan overlaid by the *Vaastu-Purusha-Mandala*: (1) Capital Complex symbolizes the head; (2) Sukhna Lake occupies the E/NE corner; (3), (4) the PGI and Panjab University located in the north; (5) the city centre, Sector-17 occupies the heart of the city; (6) cremation ground, placed in NW direction; (7) industrial area located in the southeast; (8) southwest, south and west zones for living purposes

Case study (JAIPUR)

The city was planned according to Indian Vastu Shastra (Vedic Planning for the comfort and prosperity of the citizens) by an architect named Vidyadhar Bhattacharya in 1727.

Unlike many historic towns in the world, Jaipur is functioning well in present urban context. Without losing importance; these spatial structure have sustained many cultural, social and economic changes. And this proves the robustness and resilience of these age-old systems. The study also reveals, that in the city, land use, caste, professions were organised and distributed along streets that provided the best affordance for it. It is evident, streets played important role in building a sense of community and creating unique identity of a place. Even architecture and townscape of key streets was given special importance such as in the case of Jaipur, to develop a coherent image of the city. The paper does not encourage application of Vastu principles without questioning them; it only tries to ensure that we do not ignore the ancient knowledge, as it has been enriched by trial and errors over ages.

A structure of relative wholeness is observed in the planning of the city of Jaipur. Jaipur was divided into nine squares by streets, creating large city wards These were then divided into neighborhoods made up of cluster of houses that led to individual houses. The buildings were designed as a set of rooms around a courtyard, which was the centre of all activities.

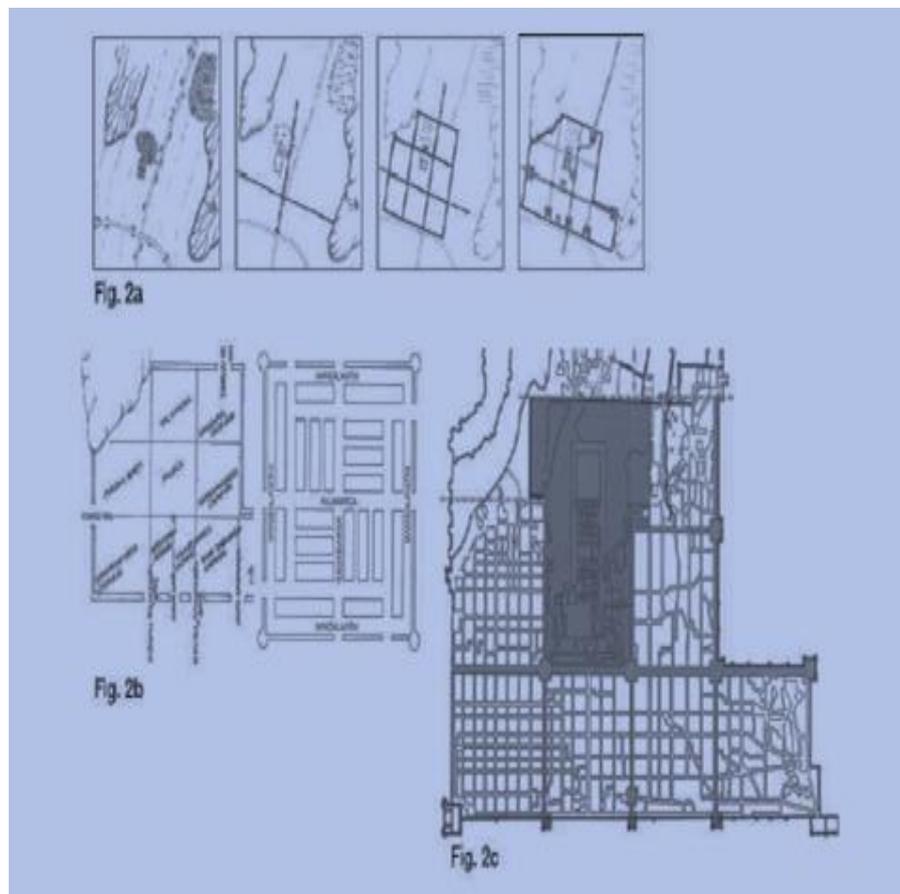


Figure: Jaipur site plan

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Vastu shastra is a study of engineering which we can use to shape a maintainable outline to the nature from the Bhupariksha to Proportioning System the investigation of Vastu Sastra Principles crosswise over Five writings gives us important data on structural arranging and plan. This similar investigation uncovers certain solid realities on the arranging standards. With a specific end goal to bring balance between human settlement and nature, Vaastu Shastra contributes two focal advancement objectives – beneficial, creative economies and amazing living conditions, additionally giving a vital system to reasonably overseeing regular asset utilize. It additionally incorporates bolster plans to

- (a) Conserve, reuse, re-utilize or recover materials or vitality as of now disposed of or squandered (Tsai, 2008),
- (b) Identify and put into utilization unused or underutilized assets,
- (c) Implement contamination control measures and changes in accordance with evaluating structures, so that these add to maintainability and to improvement objectives, and A portion of the fundamental focuses talked about beneath endeavor to bring cozy connection between Vedic information and practical advancement. They are
 - Evolution of assembled shape
 - coordinated biological frameworks
 - Sustainable vitality framework for human settlements
 - Eco-driven culture.

CONCLUSION

Vaastu Shastra, or the Indian learning of design, is as old as the Vedas, which have a place with the period 1500– 1000 B.C. The investigation of Vaastu Shastra in this paper has been worried to uncover it not as a get together of fragmentary bits of learning, yet as an intelligent and finish program for engineering plan. It is a corpus of learning that structures the outline, which has adjusted to the provincial, social and political varieties it has experienced before, and is the very premise of its continuation and contemporary utilize. The principle worry of this paper is to encourage a concordant connection between people, building and the earth, which prompts supportable advancement. Vaastu Shastra has turned out to be more significant for present day people as a result of the encompassing condition, which has picked up significance because of contamination, climatic change, and populace weights stuffed urban communities. Further, a portion of the critical purposes of Vaastu Shastra are accentuated in advancing reasonable advancement. They are

- Settlement designs which prompt asset proficient moderate transport designs,
- giving fundamental needs, for example, water-supply, sanitation and waste-handling and reusing frameworks, By changing building and arranging codes supporting little scale creation forms and by advancing the utilization Of indigenous building materials and proper development innovations,

• By executing contamination control measures and changes in accordance with estimating structures, so that these add to Maintainability and to improvement objectives; The basics of Vaastu Shastra depend on minimal effort design at a decreased ecological cost, with low ascent, high-thickness urban regions – for instance in the territory of Rajasthan – as a most ideal method for utilizing common and nearby assets. Correspondingly, in the condition of everything is re-utilized and reused. Leaves that tumble from palm trees are utilized again for the rooftops. This conventional learning is an amplify penny way to deal with the advanced world that demonstrates to us generally accepted methods to work with the earth, atmosphere and materials that had for some time been accessible yet lamentably present day engineers had overlooked and spurned them. Consequently, an old content of Vaastu Shastra that we have today is the most great customary learning existing on the planet, and with some change it could embody every one of the worries of people today.

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