

Landscape Architecture as Environmental Harmony

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Abstract

During the past ten years, there has been a great interest in holism. Architects are trying to find new ways for development of multi-layered skills working toward a holistic integrated approach and developing new ways of multidimensional and multi-layered conceptualization of the space. If the holistic approach means inclusion of all dimensions of the place: morphological, functional, social, perceptual, visual, temporal, then there is a strong platform to do, to plan, to design something where everything is in the right place, that means to create harmonious environments.

Landscape architecture, which often is referred as a pastoral scenery or garden with plants, today is reformulated. From that conventional image its usage is more diverse and rich, including urbanism, architecture, planning, infrastructure etc. Thousands of years' people have tried to recognize and to understand the meaning of space through different configurations. They invented different concepts and also used natural phenomena, planetary impacts, solar and lunar, only to create ideal living environments. All these architectural landscapes remain as a mark of different civilization of their environments.

But what is exactly a harmonious environment? Is it a state of environment when objects are in good relationship that bring balance and harmony to the living beings? Does it present a quality of things agreeing, being suitable and appropriate? Is it a language or a cultural way of seeing?

The research tries to explain environmental harmony through spatial variables, perceptual aspect, through principles of geomancy and Vedic architecture also with analogies such as empathy and transcendental meditation. The research tries also to show that landscapes of the past can serve as an endless source of possibility and inspiration for creating harmonious environments.

Keywords: Landscape architecture; Environmental harmony; Patterns; Language

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1. Introduction

Today, the definition of landscape architecture has changed. The landscape architects are trying to find new ways for development of multidimensional skills working towards a holistic and integrated approach. They try to achieve better balance between the function and beauty, always with the aim to respect the character of the landscape and its sensitivity.

If the holistic approach means inclusion of all dimensions of the place, then there is a strong platform to do, to plan, to design something where everything is in the right place, that means to create harmonious environments.

The first chapter speaks about the definition of landscape architecture, its evolution in theoretical aspect and other definitions find in literature. It tries to describe landscape architecture as science with holistic approach and not as a science that deals only with earth works.

The second chapter speaks about environmental harmony that comes as a result of the new definition of landscape architecture. It tries to explain environmental harmony in the context of space through: spatial variables and perceptual aspects. Philosophical systems and analogies also has been used to describe it.

The third chapter presents some examples of landscape architecture in different periods of time that presents environmental harmony. The examples have been chosen in that way that presents characteristics of the certain period depending on design principles and invented concepts: cosmological landscapes- prehistory, walled landscape- Medieval, curious landscapes- XV century, landscapes of human desire- XVIII century.

Landscape architecture as a science of putting things in the right place is the environmental harmony in itself. And it has to do not only with physical or social phenomenon but also spiritual one. Our world needs urgently a spiritual point of view, which connects again the man and the nature, which relates human culture

with the power of the nature, which understands cities and landscapes as organic units. That is why landscape architects must perceive the site as a living being, as a unity aspect of consciousness and essence, aspect of energy and vitality and aspect of physical form. Also, to serve with examples from the past as source of possibility and inspiration for creating harmonious environments.

Through this approach, we can generate sustainable concepts that lead toward environmental harmony.

2. Landscape architecture from pastoral scenery to a multidimensional conceptualisation

The term 'landscape' is very wide. Rarely landscape is used to refer solely to pastoral scenery or garden planting- images with which is most conventionally associated [1]. James Corner in his book "Recovering Landscape" who tried to reformulate the term landscape, mentioned that "...its usage is diverse and rich, embracing urbanism, infrastructure, strategic planning...".

One of the issues that is being discussed is how new landscapes are still represented by pastoral and historical landscapes. How can this traditional view of seeing affect in future landscapes or in definition of landscape architecture itself?

Landscape is "place" and "language". Anne Spirn in her book "The language of landscape" says that: "...landscape is pragmatic, poetic, rhetorical, polemical. Landscape is a scene of life, cultivated construction, carrier of meaning. It is a language" [2]. She describes landscapes in verbal context: "...landscapes are the world itself and may be also metaphors of the world. In other side, Corner says that because the landscape is itself a text it is open to the interpretation and transformation. He says that: "...landscape is not merely a physical phenomenon but is also a cultural schema, a conceptual filter through which our relationship to wilderness and nature can be understood" [3]. James Corner tries to link landscape as a text and landscape as a site.

Dictionaries offer this kind of definitions: "... design of outdoor public areas, landmarks, and structures to achieve environmental, social-behavioral, or aesthetic outcomes. It involves the systematic investigation of existing social, ecological, and geological conditions and processes in the landscape, and the design of interventions that will produce the desired outcome.

Landscape architecture is a *multi-disciplinary field*, incorporating aspects of: botany, horticulture, the fine arts, architecture, industrial design, geology and the

earth sciences, environmental psychology, geography, and ecology. Landscape architects work on all types of structures and external space – large or small, urban, suburban and rural, and with "hard" (built) and "soft" (planted) materials, while integrating ecological sustainability [4].

Laureates, such as the father of landscape architecture Olmsted, describe: A design which works on the unconscious to produce *relaxation and utility* or purpose over ornamentation. A bridge, a pathway, a tree, a pasture any and *all elements are brought together to produce a particular effect*.

According to ASLA- American Society of Landscape Architecture, landscape architecture is "...a science and an art which embraces those professional activities relating to the systematic planning of land areas, the design of outdoor places and spaces, the conservation of our natural resources and the creation of a more useful, safe and *pleasant living environment* [5].

From the descriptions " ...a multi-disciplinary field; ...relaxation and utility; ...all elements are brought together to produce a particular effect; ...pleasant living environment..." , we find out that they all together tend to produce a harmonious environment.

That is why the definition of landscape architecture is not anymore a science that deals with earth works but is a science of putting things in right place and trying to create harmonious environments.

3. Environmental harmony

What is exactly environmental harmony? Is it a state of environment when objects are in good relationship that bring balance and harmony to the living beings? Does it present a quality of things agreeing, being suitable and appropriate? Is it a language or a cultural way of seeing?

What does "harmony" means? Is it the definition of harmony analog with the beauty? We define a harmonious environment when we feel good ourselves. In art and science harmony has the same meaning. Can "beauty" describe the harmony?

Beautiful and harmonious works of art gives us pleasure and makes us feel good with their appearance. Similarly, beautiful and harmonious musical compositions give us a feeling of relaxation and make us feel good. In visual art, the harmony between colours is important because it indicates in an impression of harmony.

What does harmony mean in context of space?

To understand the harmony in space context first we must understand the visual structure of it. Although we use vision as a main sense of perceiving the

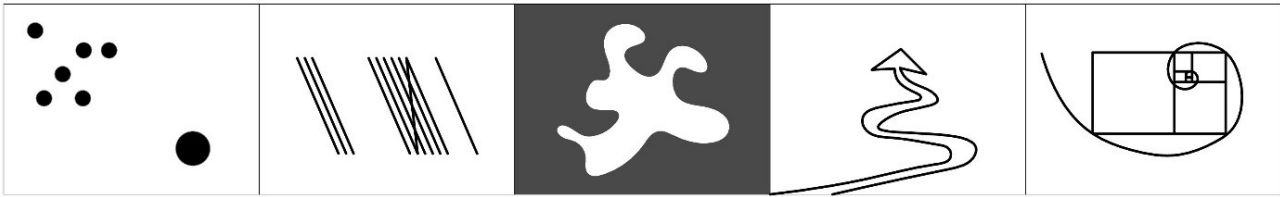


Figure 1. Visual elements of the space: position, similarity, figure and ground, visual inertia , proportion

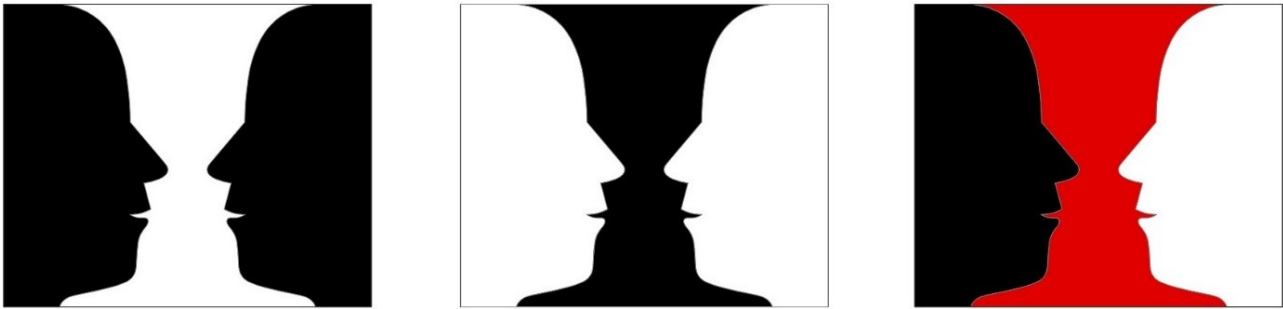


Figure 2. Perception

environment, the other senses also contribute to gain the information.

3.1. Visual elements of the place

The simplest way of presenting the complexity of our real world is through Euclidian geometry. We should use the elements or the combination of them, as separated ones or as part of other elements. For analyse purposes we should understand the attribute of each basic element before we know how they interact and effect different variables and their spatial organization that has produced that particular pattern.

In summary, basic elements are the basic mass space elements of visual expression. Basic elements can be seen in relation to light, colour, time and movement. We see them in many different ways. There are however, a limited but fundamental number of ways of varying them. Variables such as: number, position, direction, orientation, size, shape, interval, texture, density, colour, time, light, visual force, visual inertia, determine the overall visual effect, whether it is harmonious or not (Figure 1).

3.2. Perception

Perception as interpretation of sensory information is composed from knowledge, learning, memory, expectations and attention of the observer that is why the interpretation is very personal and it depends from the sense of perception (Figure 2).

In the field of urbanism perception of the space is one of the main or essential dimensions. Since the 60-s it has been developed as an interdisciplinary field for environment perception that mostly has included the symbolism and the meaning of the place and especially the sense of place.

Perception sometimes referred as 'cognition' concerns more than just seeing or sensing the urban environment. According to Ittelson "it refers to more complex processing or understanding of stimuli" [7]: cognitivity, affectivity, interpretation and evaluability.

In other side Lynch, describes, through cognitive geography, how aspects of environment can leave a strong image in the mind of the observer. Paths, edges, districts, nodes, landmarks are five key physical elements that define an image of the site. But there is a lack of using this sample because the perception of environment depends on the observer, legibility, meaning and symbolism.

3.2.1. Emotion and experience

Experience plays a huge role in sensing the site. Experience can be: physical, mental, emotional, spiritual, social, subjective etc.

Physical experience has to do with observation, while social experience is more shared experience that has to do with tradition, values, social role, symbols and language.

In context of the sense of the place, emotional, mental and spiritual experience have more influence in this

perception. Mental experience involves intellect and conciseness as a combination of thought, perception, memory, emotion, wishes and imagination whether emotion experience has to do with that how people can rationalize. This involves the emotional states, like for example falling in love, being sad etc.

Among these type of experiences, spiritual experience is very interesting since it 'coats' the experience with another hue, sensing another dimension- the dimension of universal harmony that has to do with the flows of the nature or the energy of the place. As a different state of consciousness, it involves all senses in different level of experience. That is why people, or an architect that has strong spiritual experience is able to see much more that other people do- invisible patterns.

The "edge" – It has been discussed, until now, for a harmonious environment in terms of spatial organization these elements: spatial, structural and ordering principles, but what about the attributes of the elements? Can a harmonious environment be without the present of an element of nature?

Since the human being is genetically programed to live in a natural habitat it is obvious that the presence of elements of nature makes the environment harmonious. The more nature presence in sites or buildings the more harmonious environment.

But what can we say about an environment when natural and human experiences are interlocked in such way that gives an interfering (mixed) feeling.

A fishing village on Gouqi (Figure 3) is a case of this impression. It is an example that shows us how man is used to develop the natural world into settlements, but in this case we see how nature decides to take it back. This case gives an impression of something between sublime and morbid. Is it harmonious?

3.3. Geomancy and Vedic architecture

Ancient cultures were very closely related to nature. While some cultures in passive and silentway were dealing with natural phenomena, other high cultures such as Chinese geomancy, were trying to reshape their cultural life and architectonic expression in harmonious ways.

Geomancy means interpreting the visible and invisible dimensions of places and landscapes, so that a holistic understanding of their true essence can emerge in our consciousness. It is a kind of a mixture of imaginary, feeling qualities, symbolic images, sounds, movements. It is a synergic combination of ecology, art and spiritual approach to life.

The main goal of geomancy is to improve relationships between people and their environment based on the concept of protection, education and sustainable development, to increase people's ability to efficiently use Earth, its resources and landscapes.



Figure 3. Abandoned Chinese village in Shengs archipelago

According to principles of Maharishi Vedic Architecture, known as the oldest and most complete planning system, a sustainable city is a city where everyone is happy, healthy, wealthy and wise. Only a city that is free from pollution, noise and stress and which is designed as a holistic structure in harmony with natural law, where individual life is flowing with evolutionary stream of energy and intelligence is really sustainable.

In these times, that we are living, there is a kind of isolation between man and nature. The results of this materialistic point of view in general can be seen with the destruction of environment. Cities are growing without any connection with the spirit of the place, new settlements and industrial area were placed without consideration for aesthetics or quality, the buildings are arbitrarily distributed within the space. Earth and land as spiritual beings remain ignored.

Our world needs urgently a spiritual point of view, which connects again the man and the nature, which relates human culture with the power of the nature, which understands cities and landscapes as an organic unit and makes visible the aspect of nature.

3.4. Empathy and transcendental meditation as analogy of harmony

"A human being is a part of a whole, called by us 'universe', a part limited in time and space. We experience ourselves, our thoughts and feelings as something separated from the rest...a kind of optical delusion of our consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for the few persons nearest to us. Our task is to be free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty."

Albert Einstein.

Here Einstein speaks about empathy. Empathy as a process that builds a connection between people is a state of perception without prejudice. Empathy means to 'read' the inner state of the person and to interpret in such way that could help the other person by offering a full support and developing common trust. In the same way we should act with the site or the building. We should "read" their inner state, as an intuitive act by giving to it all experience and attention.

Sometimes it needs higher level of understanding and seeing the site. In transcendental meditation the theory of sound (mantra) are vibrations that harmonize and suit the man with nature and the way of life. The collaboration between individual and universal mind according to transcendental meditation concepts lead to universal harmony. In this way through transcendental meditation tendencies when spirituality is combined

with physics, absolute with relative, meditation with physical activities, then there is a perception that leads towards a complete harmony. In this way through objectives of transcendental meditation as a science of being and art of life it can be used as analogy to experience and to understand the environmental harmony.

4. Reflection of environmental harmony in landscapes of the past

4.1. Cosmological landscape

Landscape architecture existed from the moment when people tried to change the landscape in a way to understand or honour the mysteries of the nature. Early cultures attempted to recreate or express in their build environment the sacral meaning and spiritual significance of natural sites and phenomena. A lot of works that were constructed by our ancestors especially in prehistory like raised stones, basic shapes etc., are still conjecture and we still don't know what exactly was the purpose of the function [8]. For example, cosmological landscapes that characterizes prehistoric earthworks and patterns, like Nazca lines, Lay lines, Song lines in Australia, New Grange or Stonehenge.

Nazca Lines in Peru (4200 BCE-600 CE), a series of lines, geometric shapes and animal figures. These geoglyphs were inscribed on the bad of dry lake by overturning gravel and exposing the lighter coloured earth below. It is still not known what really was its purpose: religious, ritual, related to water sources or any relation with astronomy.

Stonehenge in England (2950 BCE- 1600 CE) build by different groups of people at different times. Standing stones date from centuries and all shapes open to the northeast, framing sunrise on the summer solstice. The relationship between stones, distance and its openness presents a minimalistic harmony in relation to the space.

When philosophical systems start to base on a human capacity for deductive reasoning, people looked for rational explanations for nature mysteries. In this time landscape and architecture illustrates temple grounds, buildings and important site plans. For example; Mortuary temple of Hatshepsut, in Deir El-Bahri in Egypt (1400 BCE) or Teotihuacan in Mexico (100-225 CE). In mortuary temple, the tomb of the queen Hatshepsut comprised a series of monumental terraces and colonnades symmetrically organized around a processional axis. With a significant harmony with its dramatic background of the cliff.

Teotihuacan, the largest city in the world during the late II-century was the centre of culture of Aztec civilization. The city was orthogonally planned. The main axis was

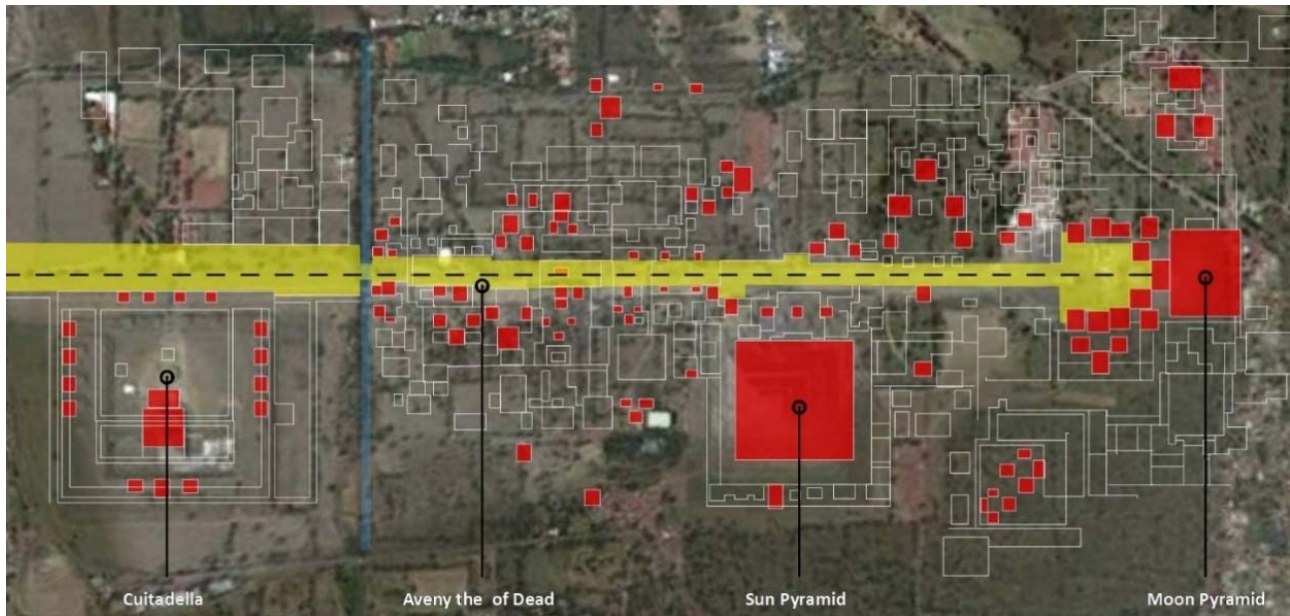


Figure 4. Scale interpretation of the city of Teotihuacan

formed from the Avenue of Dead which was oriented through cardinal directions. The temple of the Moon was the northern terminus. The Aztec sited the Pyramid of Sun over a cave near the middle of the axis. The large sunken plaza, the citadel was located across what is now the San Juan river at the southern terminus of the axis.

Although the city was formally and orthogonally planned there is an interested harmony between the buildings and places but also with the mountain in its back: the temple of Moon, the temple of Sun and the plaza-citadel (Figure 4).

Early civilizations established ways of communicating with the sacred spirits inherent in the nature. As culture advanced and humans gained more control over the natural world, organized the landscape for physical and spiritual comfort.

4.2. Walled landscapes

In the Middle Ages landscape architecture was seen in another context. It was located inside the walls. Despite the formalism and symmetry which were characteristic of this period for example: geometric divisions, walls and fences there was a concept that can be seen as an element of the harmony. This can be presented also from the phrase *locus amoenus* which means 'pleasant places'. All landscapes of this period have been compound from another element- symbolism.

In the East there is something else. Landscapes in China and Japan were inspired in painting and poetry where nature was the main component. All poets, painters and philosophers found inspiration in nature and symbolized

the emotional relationship between art, nature, humans, buildings in their work.

Suzhou, known as the "Venice of East" is a typical example. Achievement of balance between the elements, the tendencies to create harmonious environments by bringing in balance manmade compositions with those natural, often pushed authors to create nature in an artificial way as element on their design. The palace of Song emperor Zhao Ji, which is build according to geomantic principles of Fengshui, in the garden has an artificial mountain.

Saiho-ji, built on the site of an 8-th century temple presents a transitional garden of the Kamakura period. The dry cascade of stone illustrates the development of *karesansui*- a concept which creates the illusion of streams and waterfalls through the placement of rocks and gravel.

The buildings are located alongside the lakes and the whole landscape is completed with rocks covered with moss (Figure 5).

Some important principles of the Middle Ages are: utility, contrast, scale, balance and appropriation.

4.3. Curious landscapes

In XV-th century "walled minds" returned to "curious minds". Villa is an expression of humanist ideals. House and garden formed a single unit related through geometry, proportion and use. Villas, especially suburban villa was composed from house garden and agricultural component. One of the most important

thing were vistas, that usually linked the garden to the surrounding landscape and from the villa to the city. Nature was organized in different levels, from controlled to uncultivated, with the emphasis on the human at the center.

The villa Medici at Fiesole, an example of early Italian Renaissance villa is planned in harmony with the existing elements of nature. The views, as main components of the design, are possible from many angles, conferring a sense of openness to the gardens (Figure 6).

Most important design principles of this period are: hierarchy, proportion and symmetry.

4.4. Landscape of human desire

'Endless horizons' a characteristic concept of classical French landscape architecture presents a new relationship between buildings, gardens and the landscape in general. Application of optic science is a principle to create space perspectives that express the

power and control that people have over nature. French landscape architecture in classic civilization somehow was inspired in monumentality or the grandeur. Versailles, an example of absolute power and control.

In Mughal Empire the landscapes were characterized by subdivision. Four-square form (paradise), is a geometry which creates interesting patterns and modulation of space. In Mughal art shows the influence of Islamic and Hindu cultures, "... aspects of Buddhist aesthetic based on organic patterns of sculptural ornamentation were combined with Islamic sense of mathematical order and geometry" [7].

Mughal garden shows the distinctive combination of landscape and architecture achieving harmony through combination of Islamic paradise garden with Asian tradition of garden burial. Taj Mahal is one of the examples which present four-square patterns. Square patterns are created by tree lined division. The centre of the site is water which role is to mark the garden and also to reflect the dome. One of the unique things is that the tomb is located at the end of the garden (Figure 7).

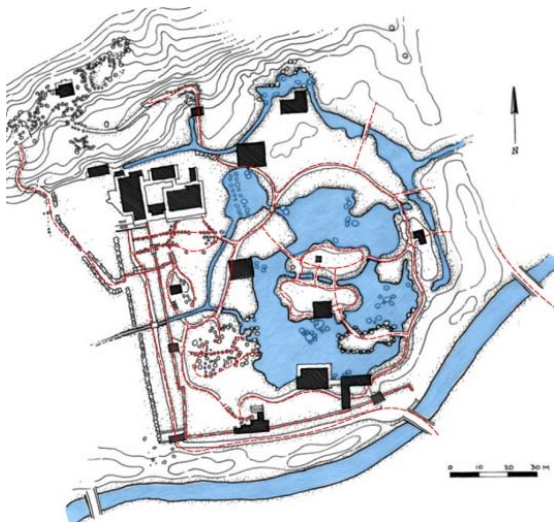


Figure 5. Saiho-Ji- the site plan and the view

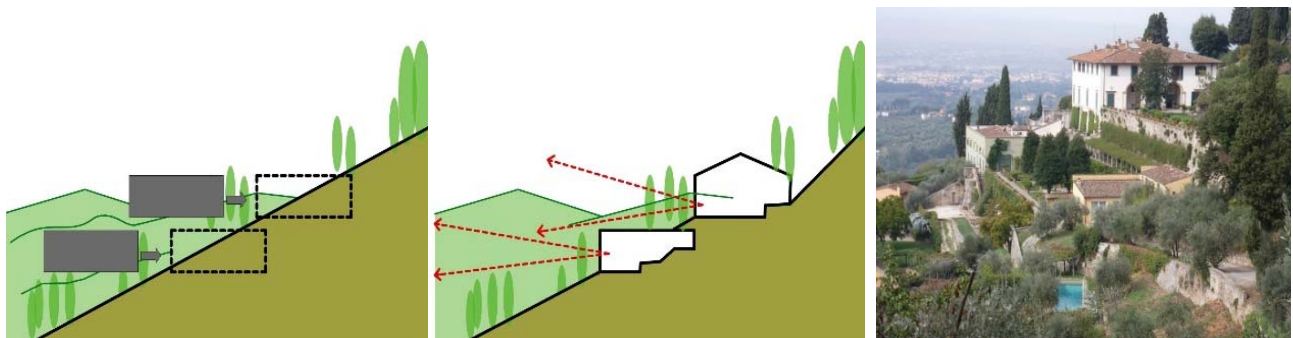


Figure 6. Villa Medici at Fiesole- buildings opened to the space and the view

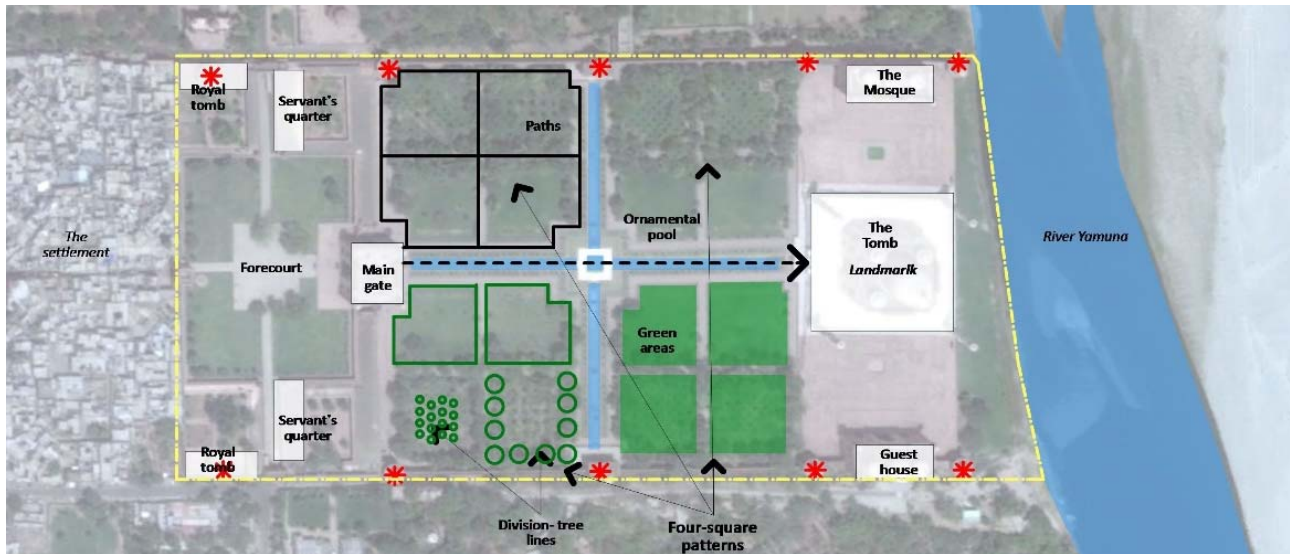


Figure 7. Taj Mahal site plan. Four-square patterns

5. Conclusion

Landscape architecture, which often is referred as nature or beautiful scenery is more diverse and rich including urbanism, architecture, planning, infrastructure. It has a holistic and integrated approach trying to conceptualize the space through multidimensionality. It means inclusion of all dimensions of the site- visible and invisible ones.

The landscape architecture as a science of putting things in the right place is the environmental harmony in itself. It has to do not only with physical or social phenomenon but also spiritual one. That is why a complex scientific approach with intuitive, holistic and multidimensionality needs to be done. In the times that we are living the isolation between man and nature results with materialistic point of view, ignoring the spirit of the place.

Our world needs a spiritual point of view, which connects again the man and the nature, which relates human culture with the power of the nature, which understands cities and landscapes as an organic unit and makes visible the aspect of nature.

Architects must perceive the site as a living being, as a unity of three aspects: aspect of consciousness and essence, aspect of energy and vitality and aspect of physical form, also to serve with examples from the past as source of possibility and inspiration for creating

harmonious environments. Through this approach we can generate sustainable concepts that leads toward environmental harmony.

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