

Impact of Contemplative Spaces and Sacred Geometry on Spiritual Development

Smruti Raghani¹, Tejwant Singh Brar¹, Mohammad Arif Kamal^{2,*}

¹Sushant School of Architecture, Sushant University, Gurgaon, Haryana, India

²Architecture Section, Aligarh Muslim University, Aligarh, India

*Corresponding author: architectarif@gmail.com

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Abstract Spirituality is a concept that has deep meaning in the universe and is independent of time and place yet connected to architecture. It is a broad notion that touches everyone. The sense of Spirituality and its interrelation with architecture is a topic that needs research. Today's architecture requires an explanation for its effects on the spiritual growth of an individual. The term spirituality is not widely observed in today's architecture and is not used in most contemporary architecture. The past architect being aware of the spiritual growth's significance had shaped an architecture that was proportionate to that time's culture and beliefs. By using architectural elements, they had filled the objective body with spiritual beliefs. This paper presents the impact of contemplative spaces and sacred geometry on the spiritual development of a person and also it studies the relationship between spirituality and architecture. This paper also discusses how architecture and contemplative spaces accelerate the recovery rate and the individual's spiritual journey.

Keywords: *contemplative spaces, sacred geometry, spiritual development, architecture, mental health*

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1. Introduction

Human belief, in the unseen world and the mystical universe is the core of an individual's spiritual development [1]. Spirituality is defined in different ways by different people. It is defined as a set of values and beliefs about self and universe considering own and other's mental health. At the same time, it is the lost aspect of mental health. The spiritual entity is considered to find life's meaning, divine love and harmony, inner and mental peace, innermost power, understanding birth, and death cycle. It connects to a person's kindness, humility, and ability to forgive and encourages honesty, patience, and empathy. Being multidimensional makes spirituality a complicated concept to define and difficult to form any boundaries. Spirituality has different perceptions and meanings for every individual [2]. The Cambridge dictionary defines spirituality as "The quality that involves deep feelings and beliefs of a religious nature, rather than the physical parts of life." Collins's dictionary says, "Spiritual means relating to people's thoughts and beliefs, rather than to their bodies and physical surroundings." Whereas the Oxford dictionary says, "Relating to or affecting the human spirit or soul as opposed to material or physical things." Dr. Maya Spencer explains that Spirituality involves recognizing a feeling or sense or belief that there is something greater than me, something

more to being human than sensory experience, and that the greater whole of which we are part is cosmic or divine. Another researcher, Aldridge, in his book regarding spirituality and modern medicine, cites at least 24 definitions of spirituality. It can be stated that there are many meanings and definitions to spirituality and depending upon the perception of an individual. It will always vary. Hence, there are difficulties with the definitions of spirituality since it states the concepts of universal connection, God, etc. though it is a subjective reality, not an objective one [3].

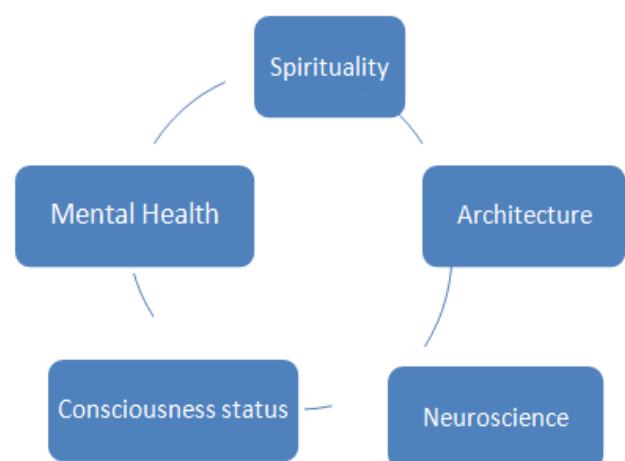


Figure 1. Co-relation of Architecture-Spirituality and Mental health

2. Research Methodology

In this paper qualitative research method has been used. The systematic literature review has been explored through internet and secondary data from relevant published academic literature from journals articles and research papers. The data collection in the qualitative research are the data that comes from a number of case study examples that are described descriptively and are supported by illustrations and photographs to reinforce the arguments put forward. The basic concepts and backgrounds are investigated through literature and on-line media, observations to work for qualitative analysis conducted for the impact of contemplative spaces and sacred geometry in the spiritual development of individual person. The paper also presents the relationship between spirituality and architecture. It also discusses how architecture and contemplative spaces accelerate the recovery rate and the individual's spiritual journey.

3. Spiritual Approach in Ancient Architecture

In historical architecture, spiritual interest buildings have always been related to very well-defined, précised, and complicated measurement systems. These geometrical relationships, ratios and proportions, and perfect geometry allow the growth and flow of spiritual energy. Architecture communicates with the physical as well as the mental status of an individual through the senses. Figure 1 shows the varying spatial arrangements and materials stimulate different emotional states and states of mind [4]. Historical buildings such as Temples, Mosques, Churches, etc., have played a significant role in the development of architecture, each holding examples of the timeless architecture quality. The spiritual space's ancient architecture has incorporated the main spiritual approach principles and quality of life improvement concerning spiritual values. Along with the focus on the form and aesthetics of the space, the architectural design concentrated on the user's spiritual growth. The spiritual energy flows through the shapes, which give the building a spiritual quality. These buildings are also designed following geometry which easily allows the spiritual energy to flow through space.

4. The Spiritual Aspect of Contemporary Architecture

Modern architects such as Jorn Utzon, Tadao Ando, and Peter Zumthor seemed to be following and guided by philosophies of architecture's origins. Structures designed by them are highlighting as they possessed the sense of eternity and divinity. The architecture designed on their principles seems simply right and would always be so (Figure 2). Professor Karsten Harries wrote in his research *Building and the Terror of Time* that beauty was derived from the language of timelessness and identified this quality as being 'organic' and originating from within us, yet he could not describe it simply with words. Christopher Alexander in *The Timeless Way of Building*

explained that the fundamental quality of the building is relatively more important by expressing the meaning of the words 'alive', 'whole,' 'comfortable,' 'free,' 'exact,' 'egoless,' and 'eternal,' which he believed did not communicate the essence of the quality of timelessness of the architecture [5]. Alexander stated that this quality could not be named and described in simple words. On the other hand, he recognized that it existed as an essence of architecture that would transcend time [6]. Nevertheless, the experiences of architecture in terms of the senses seem to be lacking in much of modern architecture [4].

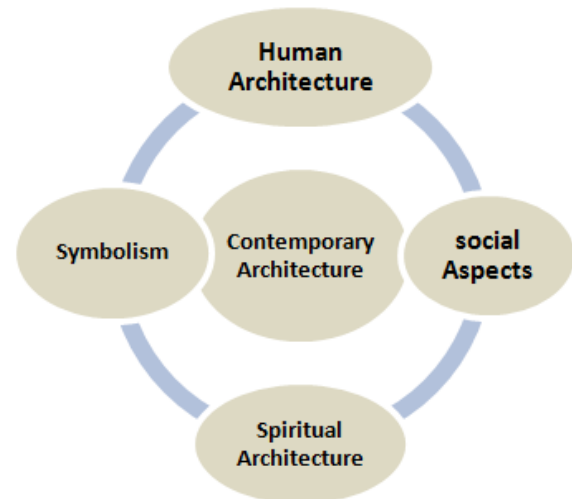


Figure 2. Parameters of Contemporary Architecture concerning Spirituality

In the article *Hapticity and Time*, Juhani Pallasmaa mentioned the lack of attention to sensory experience in modern culture and the benefits of considering it for architecture [7]. The recent interest in fabrication and construction in most architecture fails to produce work, reflection, or discourse on space's spiritual dimension [8]. Tom Porter also wrote about the lack of consideration and expressed that designers' awareness of the senses could form a much higher order of well-designed space [9].

5. Sacred Geometry and Spirituality

The geometrical conditions producing these energy qualities using geometrical shapes, numbers, proportions, colours, and sounds to replicate the quality of energy balance can be found through sacred geometry. Once it is done, similar geometric methods can be formed to magnify it, store it, spread it in a concentrated, laser-like manner, or radiate it from a central point to cover broad areas. It can also charge the energy fields of other matters with this quality [10].

Throughout the centuries, some places have been recognized as a sacred site of powerful transformative energies. These energies are not the monopoly of any one belief system but are available to all. Such space acts as a spiritual amplifying glass, magnifying the strength of both positive and negative energies. This gives the individual a unique chance to speed up the course of their evolution and mindfulness [11]. Spirituality involves a highly complex variety of procedures. It occurs in very comprehensive and varied ranges of aspects of a person, including changes in

their mind's specific parts. Along with healing of the body, there are often healings of emotions, mind, and spirit. In healing from issues at any of these levels, there may be effects individually, plus simultaneous changes at other levels, which can be profoundly observed, connected with the sacred geometry [12].

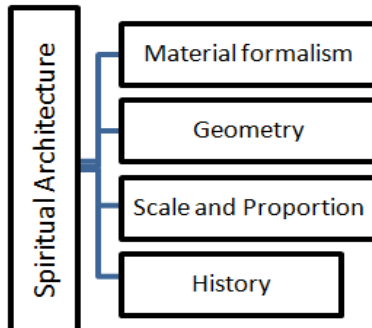


Figure 3. Aspects of Spiritual Architecture

6. Architecture and Spirituality

Designing Architecture is designing places and spaces for human experience. It has an extensive and often varied history. Architects understand the aware processes of determining this context to a certain extent. The role of architecture in shaping the human experience needs to be understood [13]. Marcus Vitruvius Pollio has exhibited the three qualities of *firmitas*, *utilitas*, and *venustas*, i.e., it must be firm and robust, useful, and aesthetically appealing, in his book *De Architectura* 2000 years ago. These three requirements can be seen missing in today's architecture [13]. Mostly, architecture is thought of as a profession that deals with the aesthetic part of the structure and designs that please the user through various applied principles. Nevertheless, it should also respond to the functional, mental, and spiritual needs of the user.

The search for reality, authenticity, and peace is going on since the beginning and is unending. It is not very easy for a human being to accept anything unknown, invisible, and does not have any form or shape.[14]. Attempt to become aware of the spirit is referred to as spirituality. "Spiritual architecture" is the system of the building which empowers this consciousness." It is an act of highlighting or bringing forth the self, not by rejecting matter but by manifesting it in the matter, at various levels, and in multiple forms." As defined by E V Walter, Spiritual space is a specific environment and phenomena which accelerates the process of imagination, nurtures spiritual experience, and express the spiritual truth [15]

Spiritual space can be seen in different ways in nature as well as the manmade environment. A spiritual space found in Mother Nature is a place chosen by individuals or groups and identified as a spiritual space. It is a separate space, set apart from the surroundings by its distinct character and, thus, different from typical or commonly found places. Spiritual space is identified because of the human need to establish a connection with the inner self. The same spiritual place to one individual or group of people may not be spiritual to others. The architecture of space can trigger the senses and evokes positive energies. It helps in calming the mind and makes it peaceful, taking

it beyond the physical state. It is an inevitable part of life that is more than mere physical shelter or symbolic artefacts. "They are catalysts towards our "dwelling," between our being and the world. Architecture, together with the other arts, has, since time immemorial, been one of the most potent means to pursue and realize this quest and give it physical-symbolic expression: how to create an identity and a place for our being from within the vast, shapeless, and infinite extent of time and space; how to affirm our presences and gain a foothold, in the universe [16]. Architecture must be an expression capable of providing an enriching experience and memorable image by expressing spirituality in the material. It must incorporate an experience of the form and formlessness that the senses perceive and beyond that.

It can be observed in the modern era that spirituality and religion are often separated. It is visible that there is a blend of humanistic psychology with mystical traditions with personal development and wellbeing [17]. On the other hand, architecture includes building technology, landscape design, urban planning, design, etc. If Architecture and Spirituality are combined, a new type of architecture can be observed, ingrained by spirituality. Spirituality and architecture have always been naturally connected (Figure 3). This attraction has established itself in unusual achievements in the field of construction. The relationship of spirituality and architecture influences architectural qualities and understanding of a space which leads the architecture of a space to become spiritual.

Spirituality allocates significant power and demands great responsibility to architecture. Considering "space" as the central concern of architecture and focus on form and geometry, architectural aesthetics must be connected to the design's spiritual aspect. The spatial, formal, or constructivist interpretations of architecture play a significant role in spiritual development. The phenomenological production and reception of architecture in historical, theoretical, compositional, or technical appraisals must be considered. Spirituality is ultimately lived and is being practiced in the present. The material world that architecture brings forth invites existential and spiritual experiences. Materials, structure, elements, and details seem to interact with light, living nature, time, and people. Thus, architectural making affects people's spiritual growth. The capacity of architecture to touch people's souls for good or bad deserves careful phenomenological investigation. [8]



Figure 4. The exterior view of Thorncrown Chapel

Spirituality was defined as 'the sacred' or, in any context, being animated by God. In current eras, spirituality is being detached from religion [17]. At the same time, architecture is understood to be comprised of architecture, building technology, landscape architecture, urban design, and planning. Combining the terms "Spirituality" and "Architecture" leads to a new form of architecture that spirituality embeds. Spirituality and architecture have a deep-rooted link.

The interlinking of spirituality and architecture has a huge effect on architectural qualities and understanding of built form, which leads the architecture of space towards becoming spiritual. Many interpretations relate to architecture and psychology, but their practical implications are underused. In studying the interactions between architecture and spirituality, the key to understanding contemporary design can lead to a better quality of life. Though modern health concerns take care of mainly physical and medical aspects, the main reason for complete wellness leads to a deep connection between spirituality, healing, and mental health. Spirituality helps to manage everyday stress, and architecture enhances spirituality. Enclosed spaces and an open environment motivate the spiritual qualities and human experience. Architecture affects health, healing, and general wellbeing. "While we daily interact with many practical, aesthetic, and religious objects, the impact that architecture has over our lives is one of the most profound produced by human. We spend up to 90% of our time in buildings that may affect us greatly even when their influence is not consciously noticed"[8]. Built environments encourage contemplative states leaving a direct impact on the brain. "Viewing buildings designed for contemplation may evoke experiential and brain signatures that consistently differ from those induced by buildings that serve everyday functions"[8]. Dr. Kinder states that monks and nuns 900 years ago have expressed their spirituality through buildings [18].

7. Case Studies

The two case studies on how architecture impacts the spiritual state of mind have been analyzed

7.1. Case Study 1: Thorncrown Chapel

Thorncrown Chapel (Figure 4) in Eureka Springs, Arkansas, is an example that shows that design impacts the mind. The chapel was designed in 1971 for Jim Reed, a resident of Pine Bluff, Arkansas. The viewer admired the site. This gave an idea of building a glass chapel in the woods for the people passing by to rest and rejuvenate themselves. Though it is only 24 feet wide, 60 feet long, and 45 feet tall, it is more significant than life. It was selected as the fourth most impressive design of the 20th century by the American Institute of Architects. The American Institute of Architects chose it as the fourth most impressive design of the 20th century. Over five million people have visited the chapel since 1980, and they have felt the spiritual impact that has won Thorncrown chapel numerous awards in architecture.



Figure 5. The interiors of Thorncrown Chapel

The construction material used is all organic, which merges the natural surroundings (Figure 5). The chapel's intricate trusses and the surrounding trees develop persistently changing forms of light and shadows which appear during the day and at night; reflections of the lights appear to surround the entire building. It gives a hypnotic spiritual experience which associates with the Thorncrown Chapel. "Our sense of awe is influenced, in part, by having space above our head that is not visible until we move our eyes (and probably our head) upward" [13]. A spire on a cathedral was transformative as it stimulates some primal notions of something ethereal. The silence of nature deep in the woods provides a "quiet" experience which is calming.

7.2. Case Study 2: San Josemaría Escrivá Church

The Church and Santa Fe training Centre is located on the west side of Mexico City. This structure represents the city's cultural and social ethics and thus is a landmark of the place. The design concept is based on the geometric strokes, which are repeated in 7 golden rectangles, two curves with a straight line that forms the cross of light which faces north. It depicts an abstract symbolism formed by The Temple, which is the main building and It has a distinct height and shape, and the complex is formed as a replica of the curve that provides the origin (Figure 6).



Figure 6. The exterior view of San Josemaria Escriva Church

The space that develops curves in the cross's straight lines at the top allows the sunlight in the building, which makes fascinating effects on the walls inside. "This geometry creates two walls outside cover it with zinc modules, scales that are directing the movement of the walls and create a texture of light and shadow with the sun's journey, for coating the inside and integrates with wooden maple staves which is a very noble material that gives us warmth and flexibility to adapt to the curved shapes of the walls looking for the light that would never get to touch it." [19]. This glorious space is well-lit naturally by the skylight on a cross shape. On the further extreme, some doors open the adjacent hall, which ends in a water mirror. Modern materials, such as hard bricks, cement-based mortars and renders, modern paints, and external sealants, are precisely designed to keep dampness out of the building by forming a water-resistant physical barrier. They are likewise designed to be firm, rigid, and inflexible. This, in turn, led to a revolution of shape. It does not outwardly look like a church at all. Only its light contrast and fish layout show its actual purpose. The interior exhibits the same geometry, optical illusions, and play. This is the main attribute of modern architecture, yet it gives a deep spiritual connection with the user and space [20]. Though situated at different locations in altogether different surroundings, the structure's primary purpose is to let the user connect spiritually and with the structure. The materials, construction techniques, period of construction, and location are entirely different in both cases. Thorncrown Chapel is situated in a wood-side location, whereas San Josemaría Escrivá Church is urban. Both seem to be serving the purpose by using solid geometry, proportions, and scale, which evokes the user's desired spiritual feeling.

8. Conclusion

Architectural achievements contribute to reinforcing the ideology or creating a revolution in the inherited spiritual values and beliefs. The gap that has been developed between the spiritual path and architecture quests for authenticity and identity between the demands of modern, efficient designs and moral spirituality. The field of 'Spirituality and Architecture' is promising and fulfilling human longing for improved life and realistic environments, which leads to optimal satisfaction. The gap between shaping designs and how the solutions are conceived has a significant impact on spiritual growth. Architecture must be developed by thinking creatively to find three-dimensional solutions to human habitats. The spiritual connection to such designed spaces imaginatively utilizes the scientific process to find new knowledge of value. The maximum time of our waking hours is spent inside a building, feeling it. The current understanding of

spirituality used in architecture tends to place more excellent value on specific ways of viewing the profession's core value. In this article, a comprehensive meaning of spirituality has been discussed about its use in architecture. Understanding of architecture about spirituality must be considered equally valuable and trustworthy. Using this inclusive understanding of spirituality concerning architecture, it is expected to incorporate spirituality in everyday architecture. Hence, it can be accepted that the field of 'Spirituality and Architecture' is the most promising to the human desire for a better life and more effective aesthetics environments can be achieved with maximum satisfaction.

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