



## Silence of Architecture

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**ABSTRACT:** Architecture is essentially an extension of nature in to the man made realm, providing the ground for perception and the horizon of experiencing and understanding the world. Architecture is a celebration of life and manifestation of an idea; it encodes messages and evokes feelings. Architecture has the power to trigger the embodied thoughts and memories of humanity, our ideas and emotions. Space sequence and its organization communicate at three levels- sensorial, experiential, and associational. The silence that speaks to an experience of pause, when, at a loss of words, we reveal the presence of our emotions and our senses. In architecture the understanding of physical space is achieved through our five senses, which may be conveyed through tranquility, sadness, spirituality, minimalism and the spatial desire quality of space. In this paper author has reviewed the architect's venerable works and paper develops a phenomenological perspective of silence to illustrate its principle through architectural elements of silence in various contemporary buildings across different built environment typologies.

**Key Words:** Silence, Tranquility, Architectural elements, Spaces quality, Spirituality,

### I. INTRODUCTION

Every built form is a statement. The statement of its creator made intentionally or non- intentionally a deliberate statement created to convey creator's feelings or a confused, misleading, misconceived statement but it is the statement whether of good taste or not is another aspect [11]. If it is a statement it has to be vocal like any other day to day statements. In architecture also the built forms are vocal. Architectural vocal is slightly different [13]. Here the language has nothing to do with audibility instead rather than being conveyed through all the five senses, it is a feeling through the space created, imparts

### II. WHAT IS SILENCE OF ARCHITECTURE

Before going into the depth of it let us go back to the early part of this write- up where the built form has been portrayed as a statement. The general statements which we make are made by speaking but on quite a few occasions without speaking, a statement is made; may be through eyes, may be through body language, facial expression or by just standing like a statue. Statement is made heard or not heard but the message is conveyed. One thing not to be ignored here is that the person making a statement through silence has to be present there. The same way in architecture the space will exist

like person as mentioned above still it will not be vocal, there will be a silence. [7]

This silence may have been achieved through the peace; may be conveyed through tranquility or may have even being conveyed through sadness and material send different messages [15]. Mild steel is different than wrought iron its galvanized form is altogether different. The shape of the enclosure which contains the space is also vocal it may be still; it may be flowing; it may be curvilinear; it may be straight or may be that the messages are different. The colors are vocal the textures are vocal the light is vocal. So with so many vocal elements a vocal shape is obvious. But using the same elements make the space silent can only be achieved through a masterly command; more so if this silence is of the special desired quality, Peace, tranquility, sadness, spirituality

### III. OBJECTIVE

To comprehend the intangible experience of silence through architectural spaces by studying the various contemporary architectural built environments. Author also aims to inquire in to the architecture of contemplative spaces and the process and evolution of the design of such a place.

This study explores the design of such a place and looks into how the subtle architectural aspects contribute to the quality of solitude and tranquility of that place further to understand the unique quality of such spaces through different examples.

#### IV. METHODOLOGY

In this paper author has reviewed the architect's venerable works and paper develops a phenomenological perspective of silence to illustrate its principle through architectural elements of silence in various contemporary buildings across different built environment typologies. Literature study of different renowned architects works i.e. Louis I Kahn, Tadao Ando, Le-Corbusier, and F L Wright, Mies Vander Rohe, Daniel Libeskind and Charles Chorra, and their different philosophies to feel and define the Silence of Architecture.

#### V. SONG OF SILENCE

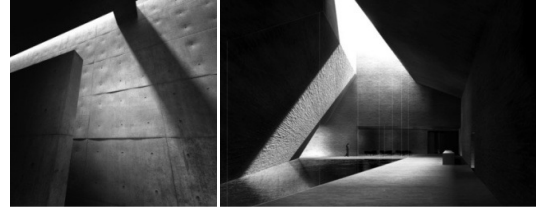
Hello darkness, my old friend,  
I've come to talk with you again,  
Because a vision softly creeping,  
Left its seeds while I was sleeping,  
And the vision that was planted in my brain still remains  
Within the sound of silence.  
In restless dreams I walked alone  
Narrow streets of cobblestone,  
'Neath the halo of a street lamp,  
I turned my collar to the cold and damp  
when my eyes were stabbed by the flash of a neon light  
That split the night  
And touched the sound of silence.  
And in the naked light I saw  
Ten thousand people, maybe more.  
People talking without speaking,  
People hearing without listening,  
People writing songs that voices never share  
And no one dared  
Disturb the sound of silence.  
"Fools," said I, "You do not know –  
Silence like a cancer grows.  
Hear my words that I might teach you.  
Take my arms that I might reach you  
But tell my words, like silent raindrops fell  
And echoed in the wells of silence  
And the people bowed and prayed  
To the neon god they made  
And the sign flashed out its warning  
In the words that it was forming  
And the sign said, the words of the prophets  
Are written on the subway walls  
And tenement halls  
And whispered in the sound of silence.

"To further elaborate the silence of architecture and to understand the unique quality of such spaces let us go through some example, rather than reading it you have

to feel it first how the architects has achieved this master quality of space through different elements".

#### Tadao Ando says that.....

*"When I design buildings, I think of the overall composition, much as the parts of a body would fit together. On top of that, I think about how people will approach the building and experience that space. If u give people nothingness they can ponder what can be achieved from that nothingness."* (Ando et.al.2011)



**Fig. 1.** Tadao Ando-Koshino House, Ashiya, Hyogo Japan.

"An architect who explored the limits of humankind's relationship with nature through His original forms and structures using the medium of unfinished reinforced concrete, Ando has developed a unique mode of architectural expression infused with a sense of nature. His concrete has been described as "smooth as silk". [16].

ANDO wanted to use a spot where the surrounding nature and the architecture would convey a strong sense of validation [6]. Spontaneous reaction through my contact with nature, I envisioned the form that this museum should take and vision back to the nature there and repeated this communication with the landscape numerous times. The collision between nature and art produced the impact between the nature and art. The Ingenuity of his concrete surface lies in the pattern, visible on the exterior and on the interior walls of the evenly spaced holes drilled into the concrete slabs to hold the moulding board screws during construction. The wholes communicate a sense of scale. The view into empty space reflects the architectural expression of restraint and the ingenuity of unsurpassable clarity in spatial treatment, achieving tranquility in monastic solitude. This profound identity of silence has a unique charm, simulating our senses through the choice of natural materials.

ANDO'S dedication to closeness to nature is truly exceptional. This poetic dimension of silence should be understand as an art of building that is outstanding in design, unified in concept and relevant to the future[6]. It takes the signature of a master architect to bring a new focus to specific site through ideas that integrate and give identity- a equality that we recognize, for example, in medieval cathedrals. It's another principle to construct itself "TADAO ANDO's gives us an architecture that draws our attention to the clean exposed-concrete construction and gives shape to the

logic of its division of space. This is justly describing as an “art of space”, the true art of spatial organization, division and penetration. Church of light has monastic and spiritual silence through the meditational space. This silence is generated with light and its reflection and also the organization, division, penetration and juxtaposition of wall which imparts peace for explaining the silence in itself.

*“There are few opening in this space, since light displays its brilliance only against a backdrop of darkness.”(Ando et.al. 2011)*

In this church the light shows a direct relationship to TADAO ANDO’S extremely simplified drawing of the structure. There is a strong contrast between the dark interior of the church and the bright light coming through the cruciform openings. Essentially a rectangular concrete box intersected at a 15 – degree angle by a freestanding wall, the chapel’s most remarkable feature is the cruciform opening behind the altar, which floods the interior with light. With floors and pews made of blackened cedar scaffolding planks, the church of light projects an image of simplicity confirmed by the unusual sloping floor.



**Fig. 2.** Tadao Ando – Church of Light.

For reverend karukome, the fact that the altar is set at the lowest point of the church symbolizes “Jesus Christ, who came down to the lowest of us all. “ ANDO says that he would have preferred to leave the glass out of the cross – shaped opening, allowing the wind to enter just as the light does, but climate conditions in winter rendered this solution unacceptable to the church. “Quest for the relation between light and shadow,” and the need for a “shelter of the spirit”.



**Fig. 3.** Tadao Ando – Church of Light.

In Meditation space (UNESCO), the silence is felt through the texture of cylindrical, reinforced concrete having holes in a rhythm to produce the sense of scale and the light enters through a narrow strip of skylight running around the perimeter and only two openings provided give the space which communicates a sense of solemnity and serenity.



**Fig. 4.** Tadao Ando–Meditation Space, UNESCO.

The structure consists of a cylinder of reinforced concrete. In keeping with its name and purpose, the space communicates a sense of solemnity and serenity. Light enters through a narrow strip skylight running around the perimeter. ANDO has created a space which creates a strong sense of spirituality. Granite slabs that had been exposed to radiation were used for the flooring and the base of the pool.

The gently running water below the approach ramps imparts a feeling of calm which is confirmed by the powerful simplicity of the structure itself. According to the wishes of those that commissioned this work, this area for contemplation would be a symbol of peace and a place in which visitors would be able to feel at one with the world. It is basically a small and simple, cylindrical space in the courtyard. The concrete cylinder is six meters in diameter and height. Light enters in this space from just a slit between the wall and the roof floating circular in shape. The arrival to the cylinder is made through a gateway into the pond above the water, giving a sense of suspension.

This is an abstract space that suggests loneliness and spiritual freedom. Nature has a key role in this work. Ando used architecture as a mediator between the natural environment and man, and find the direct meeting between them. Light, water and air are essential to the idea of Ando, evoking the sentiments and feeling of visitors [6].

**The Naoshima Island** is on the slope hill immediately above the sea level divided in three section: terrace gallery, museum, rooms (hotel) . Entire complex is linked between the building and nature” where the nature becomes the “mother of architecture”. This silence promotes the experience of living with nature. ANDO design a large exhibition space for art and a small hotel.



**Fig. 5.** Tadao Ando-Naoshima Island, Japan.

Architect combined the use of stone rubble walls and exposed concrete which is free – standing linked with nature is remarkable for its lightless and weightlessness, standing as a symbol of architectural transformation. This silence has become an intelligent message: marked by nature and reduced to its essence. Through which new dimension is achieved.



**Fig. 6.** Tadao Ando-Naoshima Island ,Japan.

*“The building itself possesses various aspects that gives it a feeling of abundance consists with its location” [4].*

#### **Charles Correa says that.....**

“Certainly architecture is concerned with much more than just its physical attributes [5]. It is a many-layered thing. Beneath and beyond the strata of function and structure, materials and texture, lie the deepest and most compulsive layers of all. And these can manifest themselves not only in epic monumental architecture, but in projects of a much smaller, more humble scale as well”. (Colin *et.al.* 2011).



**Fig. 7.** Charles Correa- Gandhi Smarak Sangrahalaya.

In Gandhi Samarak Sanghralaya, silence is achieved through the different vocal elements like--- brick column, concrete slab and the court conveying the different – different messages yet commanding the silence of calmness. Vocal quality is totally overthrown by silence [11].

The site on the Sabarmati River bank is part of the larger ashram complex and is integrated into its gardens. Five interior rooms contain the collection of the museum. The rooms are enclosed by brick walls and wooden louvered screens. All five rooms are part of the 6m square module.

Correa's subtle changes of the enclosure allow for variety in the module's lighting, temperature, and visual permeability. A square, uncovered shallow pool is located between the five rooms. The museum uses a simple but delicately detailed post and beam structure. Load bearing brick columns support concrete channels, which support the wooden roof and direct rainwater. Boards are nailed underneath the joists and tiles are placed atop the joints. The foundation is concrete and is raised about a foot from the ground. The monumental and archetypal structure of the museum recalls the well-known work of Louis Kahn, who began two projects in the region shortly after Correa's museum was built. Wooden doors, stone floors, ceramic tile roofs, and brick columns are the palette of the building.



**Fig. 8.** Charles Correa- Gandhi Smarak Sangrahalaya.

“For our habitat, is not created in vacuum – it is the compulsive expression of beliefs and aspirations (implicit & explicit) that are central to our lives”. [3]

#### **Daniel Libeskind says that.....**

“Architectural spaces, as I see it, have to be part of the story it's trying to communicate. It's not just a container to be filled; it's part of the symbolism of the building. And the symbol transports you beyond the material reality and, in Architecture, toward that which language itself cannot fully articulate” (Quoted in Libeskind and Goldgerger, 2008).

*“A walk through this exquisite masterpiece will remain etched in your memory forever”*

Daniel Libeskind often uses metaphors of fragmentation in his work, especially in regards to historical events like war and holocaust[2]. The desired sadistic silence has been achieved in Jewish Museum, Berlin through the shape of building (symbol of Jews) zigzag form, sharp corners, angled walls, sloping roofs and randomly placed window, dark sharp interiors and the quality of light at once unsettling and disturbing.





**Fig. 9.** Daniel Libeskind- Jewish Museum, Berlin.

The building is clad with “zinc” plates and sharp crisscrossing beams and columns will depicts the emotions of Jews. The Jewish race had undergone a lot of suffering prior and during the Second World War. It was also for that the Jewish museum, which will narrate the history of the Jewish race their triumphs, sufferings and pangs for the last two thousand years and it will depict the emotions of the Jews.



**Fig. 10:** Daniel Libeskind- Jewish Museum, Berlin.

“Building from indeed depicts and follows feelings”[9]

The building is in the form of zigzag with sharp incoming and outgoing corners. The architect has reasoned the shapes to be like warped star of David (the symbol of Jews, like our swastika) you get a sharp pain, an uncomfortable feeling while going around the building. The sharp zigzag continuous in the building where you find neither ninety degree corners, nor a parallel anywhere. The quality of light through zigzag windows is at once unsettling and disturbing. The dark interiors echo similar feelings. A void space of 20 meters with predominant black color slices through the entire building. The design idiom is continued even the restaurant, with its sharp, crisscrossing beams and columns. The culminating experience of walking on sharp undulating metal pieces, again in a top lighted narrow space, where yourself are made a bit aware of the unsettling mental frames mind which the Jews went through.

“Architecture is not a limited field, even though many practice it as such. It affects everyone; it is certainly positioned, so consequently it is part of film, language, the visual and visual world. The visible art of

architecture makes us aware of that which is not visible” [10]

#### **Le Corbusier says that.....**

“Architecture is the masterly, correct, and magnificent play of masses brought together in light. Our eyes are made to see forms in light and shade reveal these forms “The key is light/ and light illuminates shapes/ and shapes have an emotional power to achieve the space silence” [14].

Figurative representations of the divine no longer constitute a direct sensuous relationship between matter and spirit[13]. Le Corbusier captures this potential within architecture as a plastic art by using light to bridge the gap between vision and experience, revealing the pure form at the meeting point of the visible and the invisible.

**Chapel of Notre-Dame** play between light and mass becomes central to Le Corbusier design in a new and meaningful way. Light dematerializes mass, cutting through shadow and making it appear darker—deeper. Shadows trail across granite walls, textured like sandpaper and, when followed, lead to hidden pockets of densely channeled light full of color carving out and illuminating smaller chapels. Light and shadow provide the media through which Le Corbusier communicates with visitors, immersing them in a fully synaesthetic visual tactility. While maintaining harmony, dynamism and coherence. This feature forces the visitor to walk around chapel in order to fully understand it, adding a fourth dimension to the architectural composition: movement. Having concave and convex shape walls , random pattern of rectangular windows of different size and its orientation, semi cylindrical towers , hidden concrete columns through which the drama of light is created in the form of direct, reflected (striking effect) with various intensity to have the feel of silence in the slightly inclined floor towards the altar. Reflection of light creates first the shocking (in between the positive and negative silence) feeling like wow. Then peace and feel of amazing and surprised silence of space.



**Fig. 11.** Le Corbusier-chapel of Notre Dame du haut, Ronchamp.

The roof is separated from the walls by a thin slot. This feature is most evident from the inside, and demonstrates the architect's interest in suggesting lightness of the cover, despite its massiveness.



**Fig. 12.** Le Corbusier-chapel of Notre Dame du haut, Ronchamp.

The protagonist of the interior is, without doubt, the light. By contrast, the church is rather dark, as some Gothic churches are, emphasizing the drama of light and accenting the sacredness of the space.

#### Frank Lloyd Wright says....

*"As we live and as we are, Simplicity - with a capital 'S' - is difficult to comprehend nowadays. We are no longer truly simple. We no longer live in simple terms or places. Life is a more complex struggle now. It is now valiant to be simple: a courageous thing to even want to be simple. It is a spiritual thing to comprehend what simplicity means."* [15]

The silence is introduced by the continuous falling of water in an absolute form. Create the silence in itself... on which the whole building is integrated with its surroundings. Water fall hangs over a water fall using architectural device known as the cantilever. He describes it as "Organic"- in harmony with nature, and though falling water reveals vocabulary drawn from the international style in certain aspects, the house very much engaged with its surroundings. He appreciated the powerful sound of the falls, the vitality of the young forest, the dramatic rock ledges and boulders; these were elements to be interwoven with the serenely soaring spaces of his structure. But Wright's insight penetrated more deeply. He understood that people were creatures of nature; hence an architecture which conformed to nature would conform to what was basic in people. For example, although all of Falling water is opened by broad bands of windows, people inside are sheltered as in a deep cave, secure in the sense of hill behind them. Their attention is directed toward the outside by low ceilings; no lordly hall sets the tone but, instead, the luminous textures of the woodland, rhythmically enflamed. The materials of the structure blend with the colorings of rocks and trees, while occasional accents are provided by bright furnishings, like wildflowers or birds outside. The paths within the house, stairs and passages, meander without formality or urgency, and the house hardly has a main entrance; there are many ways in and out. "An idea is salvation by imagination".



**Fig 13.** Frank Lloyd Wright- Falling Water, Pennsylvania.

"I'd like to have a free architecture. I'd like to have an architecture that belonged to where you see it standing, and was a grace to the landscape instead of a disgrace, and the letters we receive from our clients tell us how those building we built for them to have changed the character of their whole life, and their whole existence."

#### Luis kahn says.....

*"Silence of architecture is the reaching out for the truth"*

*"Design is not making beauty; beauty emerges from selection, affinities, integration, and love to have the silence" ( Khan et .al.1958)*

This silence is achieved through the calmness of Still Water Lake. The baffled light and its reflection through still water and the openings in square, elliptical, semi-circular ,triangular and hollow columns to make that space calm and quiet by defining the proportions and forming the deep shadows. The architectural image of the assembly building grows out of the conception to hold a strong essential form to give particular shape to the varying interior needs, expressing them on the exterior.



**Fig. 14.** Louis I Kahn -National Assembly, Bangladesh.

The great chamber was circled by a family of other spaces – pressed galleries, members' rooms, etc. expressed as smaller variations on the central formal themes. To one side was a mosque linked to the main body by steps; this was skewed slightly off the main axis to face Mecca, a deviation which served to reinforce the power of the prevalent geometric order by contrast. The effect of these surrounding functions when projected into space was a jostling series of cylinders and vast oblongs grouped.

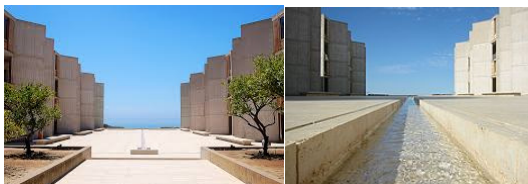
In this part the silence is achieved through the deep forming shadows with the marble bands are flush with the concrete, so that the floor lines are not legible.



**Fig 15:** Louis I Kahn -National Assembly, Bangladesh

In the assembly building Kahn has introduced a light-giving element to the interior of the plan. If you see a series of columns you can say that the choice of columns is a choice in light. The columns as solids frame the spaces of light. Now think of it just in reverse and think that the columns are hollow and much bigger and that their walls can themselves give light, then the voids are rooms, and the column is the maker of light and can take on complex shapes and be the supporter of spaces and give light to spaces. With the deep cuts of shadow, the glaring force of the sun and rudeness of the materials, the effect was entirely on the building.

**In Salk Institute**, three main clusters were planned apart from one another in the virgin landscape with views towards the pacific: the community meeting and conference areas, the living quarters and the laboratories themselves contained in parallel blocks with a water garden between them. The laboratories themselves were free-large spaces capable of considerable variation in the design of experiments. They were linked by bridges to small studies with views into the garden or out towards the sea.



**Fig. 16.** Louis Kahn-Salk Institute in La Jolla, California

Order, once an affair of repetitive crystals for KAHN, is now felt in grand components; space-making themselves....utilities are now directly channeled through the structure,...(the result being that) 'served' spaces, and 'servant' spaces are entirely integrated,...this 'meaningful order' was almost instantly arrived at in KAHN'S design. Materials used are concrete, wood, marble and water. Concrete is left with exposed joints and form work markings. The idea of simple and; the

served space of laboratories where research is performed, the serving space of offices where thought initiates.

*"A great building must begin with the immeasurable, must go through measurable means when it is being designed, and in the end must be unmeasured"*

The central court, as a typical Kahn-like space of shimmering blue water, a band pointing toward the ocean epitomizing what human endeavor can accomplish at one scale with geometric clarity and authoritative but modest deliberation, to give to the scale less sweep of the ocean, here the Pacific, a poignant gesture."

**LUDWIN MEIS VANDER ROHE says....**

*"Less is more"*

**The Farnsworth House** is an exemplary representation of both the International Style of architecture as well as the modern movement's desire to juxtapose the sleek, streamline design of Modern structure with the organic environment of the surrounding nature. Mies constructed this glass box residence of "almost nothing"[9]



**Fig. 17.** Ludwig Mies van der Rohe -Farnsworth House.

The Farnsworth House is expressed as three horizontal planes, the lower deck, the floor plane/upper deck, and the ceiling/roof plane. These three horizontal planes cantilever beyond vertical members expressing their place at the top of the special hierarchy of the home. The placement of the lowest plane, the lower deck, is asymmetrical in both of the building's major axis. The vertical members who hold these planes in place read strongly in elevation, forming elevations and spaces which express trabeated structural nature.



**Fig 18:** Ludwig Mies van der Rohe -Farnsworth House.



*“Architecture is the will of an epoch translated into space” (Alto et.al.1997)*

The home expresses Mies' belief that the proportion of objects themselves and between objects was critical to creating successful architecture. The dimensional proportions of objects are very carefully controlled. The objects in the home are also placed such that the resulting proportions in the space are pleasing. While the direct proportions are for the most part numerically irregular and empirically unrelated to one another, the harmony of the resulting architectural proportionality is undeniable.

The plan and elevations of the home are characterized by a lack of symmetry. In the tradition of international modernism, axial symmetry is abandoned in favour of more dynamic architectural forms. This is evidenced in the house by the placement of the core within the home as well as the placement of the lower deck, both of which are centered about neither of axis in plan. Additionally, the home's upper deck assures that the portion of the home enclosed by the glass envelope remains off centre. The interior of the home is characterized by the use of a free plan system. As Mies used it, the free plan featured a single large space, usually broken only by a partial height core. The spaces surrounding the core are demarcated subtly by the wing walls that are utilized in the core design but are not separated formally by full height walls.



**Fig. 19.** Ludwig Mies van der Rohe -Farnsworth House.

The main house is placed at an elevation approximately 5 feet above the plain to protect the living area from the perpetual threat of flooding. The close proximity to the Fox River allowed for the opportunity to raise the house and nearly disconnect it from the ground, providing a floating observation platform for the occupants. Through the large expanse of glass, the river adds another horizontal component. The lawn and the river combine with the decks to create additional, well proportioned platforms.

*“Today i looked out my window,  
and silence was all around me.  
I could see the trees, the clouds and the birds,  
but all i could hear was silence.*

*My eyes searching for sound in the noise  
of the silence.*

*Gently the sounds begun  
to sing in my ears. This moment of silence,  
my thoughts found peace”*

## VI. CONCLUSION

Silence is often acknowledged as emptiness: the big nothing [10]. It is experienced as the opposite of sound, the negative of matter but when it enters the architectural space then it takes shape as built matter. Silence is characterised as endless space. The element of space; wall, floor, roof, gives spatial definition which is essence with silence by juxtaposing. Masterly treatment of elements can creates silence of desired variety leading to the idiom “Silence of architecture is a master stroke or a stroke of masters.”

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