

# ON MINIMALISM IN ARCHITECTURE - SPACE AS EXPERIENCE

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Architecture has to be experienced to be understood. The complexity of the experience is seen through a better understanding of the relationship between objectivity (architecture) and subjectivity (our life). Being physically, emotionally and psychologically aware of the space we occupy is an experience that could be described as being *present*, which is a sensation that is personal and difficult to explicitly describe. Research into experience through perception and emotion positions architecture within scientific fields, in particular psychological disciplines. Relying on the standpoints of Immanuel Kant, the paper considers the juxtaposition between (minimalism in) architecture and philosophy on the topic of experience. Starting from the basic aspects of perception and representation of the world around us, a thesis is presented in which the notions of silence and light as experienced in minimalism (in architecture) are considered as adequate counterparts to Kant's factors of experience - the awareness of the objective order of events and the impossibility to perceive time itself. Through a case study we verify the starting hypothesis on minimalism (in architecture) whereby space becomes an experience of how the world touches us.

**Key words:** minimalism, architecture, experience, silence, light.

## INTRODUCTION

Architecture provides an important setting for everyone's life. It must inspire. As architecture is a personal, enjoyable and necessary experience, it has to be experienced to be understood. The task of architecture is *to make visible how the world touches us*, as Merleau-Ponty wrote of the paintings of Paul Cézanne (Merleau-Ponty, 1991). We all have the capacity to sense architecture, but very few people understand how powerful architecture is or how it can effect everyone's life.

The house can be easily represented, especially by photos or film. This form of the house seems distant, and represents an idealized picture of the world we create, which eventually becomes perfectly good and acceptable. However, some spaces are not felt as different, but are very tactile. Some heights we cannot fathom until we go to those houses called skyscrapers, where we feel the sky is moving in the wind. And perhaps the strongest space experience we can have is to breathe and sense the enclosure of some surrounding walls. We all learn to love concrete, even if we cannot imagine the sensation of cement sticking to a wet palm. Being physically, emotionally and psychologically aware of the space we occupy is a feeling that could be described as being *present*, which is a sensation that is personal and difficult to

explicitly or accurately describe. Bruno Zevi, Italian architect and theorist, who wrote about our real understanding of meanings in architecture, has written that no other art form could provide that sublime spiritual pleasure within the work itself. He called that feeling *live movement* (Zevi, 1948). A direct experience of space is highlighted by Tschumi as the ultimate pleasure of enjoying architecture (Tschumi, 1996). Jurgen Joedicke raised the question of how to explain the effect of space on a person. His attitude was that one had to take into consideration the experience of space as well as spatial perception (Joedicke, 2009). Gaston Bachelard recognized the desire for a total merging of the self and the house through a bodily intertwining. He called that feeling *curl up*, as the phenomenology of the verb *to inhabit*. He explained that only those who have learned to do so can inhabit with intensity (Bachelard, 1969).

The Dutch architect and Benedictine monk Dom Hans van der Laan (1904–1991) is known for his legacy of architectural writings and realizations arising from his search for the fundamental principles of architecture. He suspected that meaningful architecture had far deeper roots than the rules of style through the ages. He searched for those roots neither in technique nor in ideology, but rather looked for them in our experience of architecture. In his manifesto he aimed to combine spatial philosophical concepts with practical design tools (Laan, 1977).

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## EXPERIENCE JUXTAPOSED TO ARCHITECTURE AND PSYCHOLOGY

Research into the term *experience* includes the terms perception and emotion, and it associates architecture with psychological disciplines, such as: environmental psychology, the psychology of perception and the psychology of art. Environmental psychology is an interdisciplinary field that includes areas which are not in the domain of space while studying the interaction between man and his environment, which can be understood in very general terms (e.g., nature, the built environment, the social environment) or very specific ones (an environment for education, information etc.). Architecture can affect people's emotions, behavior and health, and from the perspective of architecture, the users themselves, those who live in a certain environment, can be important participants in creating it. Scandinavian countries are known for their elaborate mechanisms for the active participation of residents and users in designing architectural space.

In the field of architecture, interest in researching the relation between the user and his environment arose in the 1960s, when numerous studies emerge in this field. Research by Kevin Lynch has had a major impact and significance in the field of environmental psychology and spatial planning<sup>2</sup> (Lynch, 1960).

### Architectural senses for experience of space

The topic of perception and memorization is addressed by the psychology of perception. The basic psychological theory aimed to define the laws of perception is the Gestalt theory. Psychologists define perception as being *based on sensory data*. It is a cognitive psychological function which enables the body to receive and process information and to maintain contact with the external and internal reality. The appearance of an object is determined by crossing its actual content and subjective dispositions which contain individual and general history, the dynamics of the present and the anticipation of the future<sup>3</sup>. Our mind acts individually and often in the domain of the unconscious, leading to a process of individualization regarding our perception of reality. In this process our experience exclusively becomes ours (Jung, 1968). The process of perceiving space can be defined as a form of absorbing and ordering the information gained whilst experiencing and interacting with the space (RA, 2014). Perception can be seen as a process of *making sense* of this information, a process which is particular to each individual (Krstić, 1988). A cultural context could have a great impact on the aesthetic experience of images existing in perceived reality (Stevanović, 2011).

<sup>2</sup> The particular focus of his research was the spatial visual perception of people in particular examples of American cities. He found certain laws and constants that show the possibility of making a typology of the elements that people perceive in urban space.

<sup>3</sup> Perception or observation can therefore be seen as a "direct experience through the senses, which stems from his relationship with the environment in direct contact" (Lazarević Bajec, 1989:36) and as an integral part of the learning process. "Perception is an active process through which we make sense of the world around us...we normally integrate the experience of all our senses without conscious analysis" (Lawson, 2001:85). "Our immediate awareness of the phenomenal world is given through perception" (Norberg-Schulz, 1966:27).

Our everyday conception of space is enabled by five senses: sight, hearing, touch, taste, and smell. A well-known statement by Louis I. Kahn suggests that hearing a sound is just like seeing a space, and Carlo Scarpa's architecture frequently presents the experience of taste. Until recently, philosophers and scientists have studied each of these senses in isolation. However, recent neuroscience has undermined this conception by showing that different senses are integrated. Everyday experiences – watching a film, eating a meal, walking along the street – are a result of the combined operation of different senses. To understand perception we need to understand multisensory perception. The science of perception has provided a great deal of empirical evidence concerning the multisensory operation of the senses. Philosophers, psychologists and neuroscientists should work together in an interdisciplinary and reciprocal way to develop an account of multisensory perception; they should also work with others in the humanities and the arts – including artists, filmmakers, and musicians – to trace the consequences for our wider understanding of the senses and our sensory experience.

Although many elements from the environment are recorded within different senses, and still not separated in our consciousness, they are of great importance for the image of a whole and for experiencing a particular environment. Juhani Pallasmaa (2005) advocates *architectural senses* instead of the dominant visual understanding of architecture, which are characterized as reduction, and which seek a possible explanation of the repulsion, impression of immateriality and architectural autism that people in their environment often feel. In minimalism, architects in their projects consciously or intuitively emphasize a sense of materiality and tactility, texture and weight, density and space materialized light, which result in the engagement of the senses in the perception of architecture. Choice is the result of complex physiological processes, but with the prevailing emotional tone. Emotion tints all human experience, including the high flight of thought.

### Experience as a model of how we understand architecture

Architecture has to be experienced to be understood. Our physical exploration of space (Cornelis, 1987) is central to our understanding of architecture. It is detected first through the body and senses before being rationalized by the mind. We have to be physically present to experience space in its entirety (Böhme, 2005). By inhabiting space individuals can sense the character of the surrounding area.

Architecture is a personal, enjoyable and necessary experience. The key to the understanding of building is to grasp space and to know how to see it (Zevi, 1948). *Eyes, Which Do Not See* is Le Corbusier's famous thought (Le Korbizije, 1977). Knowing how to *see space*, or how to be spatially attuned is an ability with which we are all born. Experience is the meaning of all terms for the various modes through which a person knows and constructs a reality. Architectural experience for individuals means the experience of space. There are well-known examples of Chinese architecture such as the Forbidden City (Figure 1), which are laid out to be experienced as a sequence of spaces



Figure 1. Forbidden City, Beijing, China  
(Source: author)

rather than a collection of individual buildings. Well-known architectural and philosophical theorists concerned with experiencing space include: Henri Lefebvre (1974), Brian Lawson (2001), Yi Fu Tuan (1979), Gaston Bachelard (1958), and Steen Eiler Rasmussen (1959). With reference to their work, the initial questions of how we perceive, experience, and interact with space can be explored.

### EXPERIENCE JUXTAPOSED TO ARCHITECTURE AND PHILOSOPHY

An empirical or relative space which is an object of experience can be subject to one's sensibilities, in as much as it is symbolized by what can be sensed; and presumably the same must be true of time. Immanuel Kant, a German philosopher who is considered the central figure of modern philosophy, argued that the human mind creates the structure of human experience. In his *Metaphysic of Experience* he makes two statements:

1. In experiencing we are aware of the objective order of events.
2. We cannot perceive time itself. What we perceive is actually changes in time, and we measure time, not in itself, but by changes which take place in it.

Adequate counterparts to Kant's factors of experience in philosophy – awareness of the objective order of events and impossibility to perceive time itself – could be notions of silence and light as experienced in minimalism (in architecture).

#### Silence as the experience of space

The experience of the minimum can be called silence. It should be found useful and beautiful. The expressiveness of silence is more subject to the assessment of sharpened sensibility, developed on the basis of taste for the culture. Sensitivity is a philosophical category related to issues of meaning, a sort of spiritual instrument with which we feel the world as a kind of specific *flavor* of existence. (Vasilski, 2012). Gaston Bachelard wrote about *World of Silence* by Max Picard as a book written to express how silence acts simultaneously on human time and in human speech (Bachelard, 1969).

Silence means an ambiguous space. Ambiguous expressions are silent intervals, empty spaces with abstract nature. According to Ando, it aims at neither the void nor the figural Western form or the Eastern silence (Dal Co, 1997). Silence

means tranquility, as the most essential auditory experience that is created by architecture. A powerful architectural experience silences all external noise; it is a responsive, remembering silence. In silence we are aware of the objective order of events, but at the same time our attention is focused on our very existence, and as with all art, it makes us aware of our fundamental solitude (Pallasmaa, 1994). Silence comes from space, emptiness, clarity, and transparency. In architecture, emptiness implies that a building is twisting and turning to accommodate our every movement and wish, squirming to please, since a building is formed according to innate principles of order, structure, shelter, and the evolution of architecture (Benedikt, 1987).

#### Light as experience of time

When one uses the axiom *Architectura sine luce nulla architectura est* (There is no architecture without light) by Alberto Campo Baeza, one can then say that it is not possible for architecture to exist without light (Vasilski, 2010). In minimalism natural light is transmitted into interior space, usually not directly, but through uniquely designed architectural elements in order to control and structure light reflections. The use of light creates plastic and artistic effects. Light and shadow create a playful interaction of color, texture and related emotion associated with the plan. The contrast between these can be sharp or blurry depending on the desired effect. This strategy displays the texture and is one of the strongest design features. Thus, by experimentation with the qualities of light, it becomes a space-defining factor through which a sense of spatial depth is brought about.

Based on sensibility in form and space making, minimalism concentrates on light as an architectural element or a structuring material. Architects experiment with the ever changing qualities of natural light and its spatial effect. It can be stated that they use light poetically. The transformation of space with light can be experienced in several ways: lighting is visual, environmental, and sensual. Initially, the combination of space and light design features creates a sensory observation for the individual. The metaphysical conditions of light affect how architecture is perceived; the visual dimension becomes abstracted and diffused, rendering the material immaterial and causing a shift in understanding about the world we inhabit.

Space is the lived space or the experience of the *anthropological* space (Merleau-Ponty, 1964). The sense of movement and spatial dynamism are the outstanding interior expressions of the building. Light can be stated as one of the significant qualities leading to creating the sense of movement in the building. As light is conveyed through shafts into the organic and bare surfaces of an object, sculptural light and shadow effects occur. The use of light, thus, intensifies the qualities of architectural spaces by offering changing spatial perceptions through which the dynamism of movement is made manifest (Vasilski, 2014).

#### Case study: Silence and light as experiences in Peter Zumthor's architecture

To create interaction between man and architectural work, Peter Zumthor wants the viewer to feel the space in all its aspects. He uses silence and light as the means for causing



different feelings. His building is both sensually palpable and emotionally experienced. In the simplicity of his buildings it seems that he ignores the theoretical attitude about architecture as an art or science and the viewer is left to his own intuition, association and experience. Intellectually and spiritually he returns to certain moments from the past in which he strongly feels reality, and with emotions evoked by what he saw, heard, and felt, smelled or touched, he then tries to creatively convert these emotions into an architectural work. Thought and association are turned into an object of perception. Silence comes from beauty and from being. His buildings have a beautiful silence that can be associated with attributes such as composure, durability, presence and integrity, and with warmth and sensuousness as well. He is entirely convinced that good buildings have to absorb traces of human life and thus receive their identity (Zumthor, 2005).

### **Peter Zumthor, Swiss pavilion *Sound Box*, World Expo Hanover, 2000**

Pavilions are considered to be a special type of building, according to the way they communicate with the user. They almost always erase the borders between open and closed. Their only function is to attract and draw the observer to experience space. They are usually prefabricated, removable, degradable, biodegradable, temporary, entirely for the purpose of performance; they transmit messages from experiencing the play of light, pleasure and relaxation, leisure and discovery. And as such, with all these positive associations, they act as a medium. Static and movable, they are a medium of communication that covers all the senses and appeals equally to all generations, genders and expectations. Although completely public, they trigger one of the strongest instincts and mostly resemble the primordial shelter.

One such example is the Swiss pavilion *Sound Box*, designed by Peter Zumthor in 2000, for an exhibition in Hanover (Figure 2). The irrational use of wood sends a message. This message is silence. One is supposed to pass through this object with closed eyes, in order to better feel the texture and smell of the raw wood. Zumthor sees interiors as large instruments which collect sound, amplify it and spread it further. His wooden architecture is composed of massive blocks of wood as big as a house, made by regularly hewn layers (Linz, 2009).

### **Peter Zumthor, Thermal Baths, Vals, Switzerland, 1996**

The thermal baths in Vals (Figure 3) are based on the concept of the original experience of bathing, cleansing and relaxation, and being in contact with rock and water. Heavy boulders and pools of water are intertwined in continuous space. It is possible, among the dark and serene colors, to hear only the sound of the water and to feel the strength of the stones. One experiences a cave, while the atmosphere is almost spiritual. Everything is subordinate to the act of swimming and/or one's own sensuality. The monolithic stone mass of the bath in Vals seems to have been excavated rather than built to house the necessary functions. Its monumental interiors are filled with silence and light. It has an antique sense of calm and peace, where contemporary connotations are unessential (Bertoni, 2002).



Figure 2. Peter Zumthor: Swiss pavilion *Sound Box* World Expo Hanover, 2000. (Source: Linz, 2009:274)

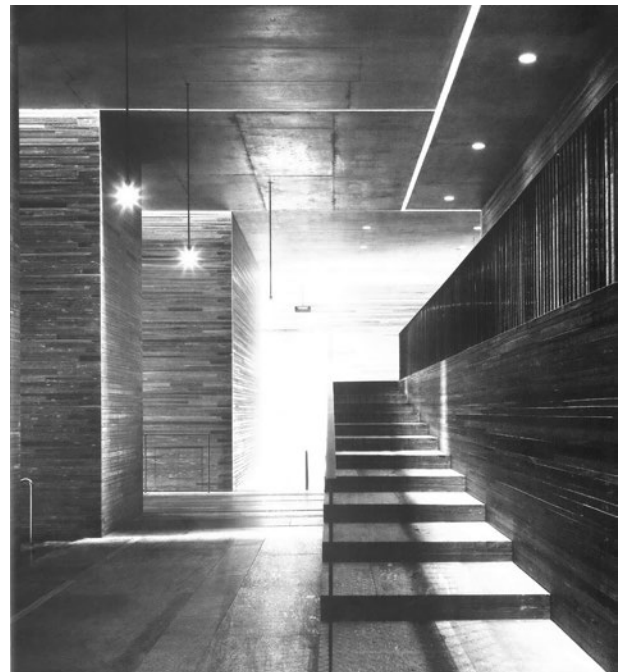


Figure 3. Peter Zumthor Thermal Baths, Vals, Switzerland, 1996. (Source: Bertoni, 2002:159)

### **Peter Zumthor, Bruder klaus field Chapel, Mechernich, Germany, 2007**

The Bruder Klaus Chapel (Figure 4) stands in a field at Mechernich in Germany and tells the story of local farmers who wanted to honour their 15<sup>th</sup> century patron Saint Bruder Klaus. The object was created by stacking layers of concrete to the desired shape on the inside, then burning the wooden form from the inside in order to obtain a particular

structure and the color of concrete. With no installation, and only two openings to the outside world, like the Pantheon, the atmosphere inside the chapel changes as the daylight changes. Rain and sunlight share the building. The interior space is lined by black charred surfaces; it is lit from above and open to the sky. Mystical silence in space is experienced by light, essentiality, simplicity, perfection, total composure, reflection, patience. Lastly one's experience is awareness of oneself. This reminds us of the well-known thought by Ludwig Wittgenstein that working in philosophy is just like working in architecture: both mean more as a working on oneself.



Figure 4. Peter Zumthor-Brueder klaus field Chapel, Mechernich, Germany, 2007.

(Source: <http://www.vanityfair.com/style/features/2001/07/peter-zumthor-architect-buildings>)

## CONCLUSION

Architecture continues to have a great human task in mediating between the world and ourselves by providing a horizon of understanding our existential condition and constructing settings for dignified life.

For us, at present, minimalism is contained in architecture as well as in our life. It is a way of thinking, experience acquired throughout life – searching for the essence and discarding the superfluous. It is an experience of man's living space, which searches for the purity, transparency, harmony and simplicity of life itself. Triumph over the senses is to create what the senses cannot hear – our own truth.

Buildings work in conjunction with other design innovations, social media through mobile devices and wearable technologies are just a few of the ways architecture can work to help its inhabitants improve their own potential. As architecture increasingly engages with its inhabitants in real time, it will become possible to personalize experience to suit individual needs and goals. And the more personalized architecture becomes, it engages with inhabitants in entirely new ways and becomes an active player in their experience. Maybe the reason why minimalism has become the sign of our time is its endeavor to make the world a better place.

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