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Experiencing spaces and places through human senses with the presence of nature

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Abstract:

The theory of "Percept, Affect, Concept" by Gilles Deleuze & Félix Guattari will be the methodology for discovering the impact and the presence of nature on experiencing spaces, in some chosen iconic architectures such as "Villa Savoye" by Le Corbusier, "Fallingwater" by Frank Lloyd Wright and "Swiss Soundbox" by Peter Zumthor, ranging from modern to contemporary architectures.

How can the presence of nature lead to a multisensory unique experience of Space?

A committed, integrated, or convoked nature will form the main topic of the architectural multisensory experience of spaces, atmospheres, experiences, and memories of a place, of what was learned, of what was lived, and memories of places as well as "*Genius Loci*", to have such a unique experience.

Keywords:

Atmospheres - Commitment - Integration - Convocation – Percept, Affect, Concept - Senses – "*Genius Loci*" - Multisensory experience.

1. Introduction

According to Johann Wolfgang Von Goethe, "The hands want to see; the eyes want to caress", we, people, live every day, watching, touching, listening, and measuring our bodily existence with our environment. Our home, our architectural envelope, is the refuge of our body, our experiences, and our identity. We are in constant dialogue with everything that surrounds us, insofar as it is impossible to detach the self from its spatial and situational existence, which reminds us of the poet Noel Arnaud: "I am the space where I am".

We see architecture; we face it; we imagine its interior space, its atmosphere, its colors, its materials, its circulation, its structure, its smell, etc. We imagine ourselves in it. We follow the architect's approach to the design of his building, starting from his perceptions and going through his affections to draw his designs.

Then we move on to the reality of experiencing, living, and feeling this architecture. Each experience will be a world of discovery, a dive into a particular sensory world (Bonnaud, HDR, 2004; Aziz Amen, 2017; Aziz Amen & Nia, 2018; Amen & Kuzovic, 2018; Amen & Nia, 2021). Thus, we experience architecture through all the parts of our body, that integrate us into a collection of perceptions as well as into a wide cultural knowledge. This architectural experience will elicit the effect of architecture on the senses through ambiance, atmosphere, space of memory, imagination, and sensation.

To perceive and receive architecture is to understand its components, its mission, and its purpose. Architecture's purpose is to create a dialogue with man, his sensory qualities, and his multisensory experience. It is a language of the body with its surroundings. According to our daily and bodily experiences, architecture is the best art that arouses most of our senses. Immediate or distant, perception stimulates our senses, such as vision that exceeds the other senses. Many human senses come into action in an architectural experience because reality through our eyes is not the one that is translated into architecture or photography. Vision is not perception.

How can the presence of nature lead to a multisensory, unique experience of space?

We base our study on an architectural corpus that presents a great acuity in our sensory base and shows the sensory relationships between our body and nature or environment, to refine and enhance our relationship with the world. The first part of this article addresses the materials and methods, the methodology of analysis according to the theory of Gilles Deleuze and Félix Guattari: "Percept, Affect, Concept". The second part, the results, addresses the architectural experience through perception and reception (percept), which is based on the presence of nature. This part will lead into the third part, the discussions, where we talk about affections and affects (affect), leading into a concept and theorizing this design concept (concept). "Percept, Affect, Concept" as a methodology of analysis is the glue that holds this article; therefore, the reader will find a relationship between this methodology and experiencing spaces and places.

The visitor to "Villa Savoye" walks through time and space, discovering along the way the five points of modern architecture and questioning the nature that accompanies it. He reasons about the connection created and walks inside while feeling outside because of the large cinematic ribbon windows until he arrives at the roof gardens. Thus "Villa Savoye" is a pure, functional building, inspired and linked to nature, "Le Corbusier's Villa Savoye makes us believe in the union of reason and beauty, in ethics and aesthetics" (Pallasmaa, 2012).

The visitor to the "Fallingwater" House will also be walking in the space of this building, connecting with nature and ancient architecture. Frank Lloyd Wright created an intimate link between the "Fallingwater" House integrated into nature and the nature integrated into this house. An architecture resembling an unfinished work is in continuous variation with and by nature around it, at different seasons and moments of the day. Imitated nature and camouflaged architecture, an entity of nature and architecture, are in symbiosis, immersion, and fusion. It leads all our senses to a multisensory experience rich in emotions. This architecture rests naturally above the waterfall and has its place in nature through horizontal stratifications such as those of rocks and vertical architectural appearances imitating the momentum of trees toward the sky.

The visitor to the "Swiss Soundbox" in Hanover will feel that such a designer must be a Swiss who has lived in a carpenter's depot among the wooden stacks. Zumthor's knowledge of this material and its attitude towards the elements of nature, will serve to create a labyrinth as if you were lost in the Swiss forests. The "Swiss Soundbox" activates all our senses by summoning the elements of nature such as light, wind, and rain, that freely enter the pavilion to make the raw wood "breathe". This pavilion is a multisensory event that differs from one person to another according to their environment, experiences, achievements, and receptive capacities.

2. Materials & Methods

2.1 Percept, Affect, Concept

Architecture is a machine for producing senses, sensations, perceptions, and affections, starting from a percept that will lead to an affect and ending with a concept of an architectural experience. Percept is the necessary distance to give way to the reception, while reception stimulates affects and gives time for Kinesthetic discovery. That discovery, that experience, those percepts, and the affects are to be shared through concept.

Opinions are ideas previously formed with a certain intentional experience when visiting a certain architecture. Deleuze and Guattari (1991: 174) add that: "*Les opinions sont des fonctions du vécu, elles prétendent avoir une certaine connaissance des affections*" [Opinions are functions of experience, they claim to have a certain knowledge of affections]. We, people, pretend to know the sensations that will be experienced and the affections that will be awakened, but the experience might not be as planned, it may be far beyond or different.

2.1.1 Percept and Perception

To produce a perception, reception is essential. The human body has sensory receptors, some of that are immediate, such as the skin and muscles, and others at a distance, such as the ears, the nose, and the eyes.

Immediate receptors. Touch, the first of the senses in action, is an immediate receiver. Perceiving through the skin, hands, feet... etc, the tactile system is as old as life (Hall: 1990).

The skin is surrounded by the outside world. That is how man meets the world. The skin is the first sensory organ of a human since its creation in the womb of his mother. It is through the skin that the fetus makes its first sensory experience. He discovers the limits and boundaries between the self and the world as announced by Peter Sloterdijk in his book (2011) "Spheres, Volume 1: Bubbles". The skin is a sensory, receptive, resonant membrane between man and his body and subsequently between the body and the world (Rosa: 2019).

The skin's nerves are responsible for proprioception and thermoception. They inform the brain of the thermal state outside the skin, and the activities of muscles for harmonious and functional movements (Hall: 1990).

Auditory perception and reception. "Human existence begins with perception," said Merleau Ponty.

Perception begins with man's existence and progresses to subject-object relationships, such as the auditory relationship of "nobjects" (archaic and prenatal relationships between mother and child, as per Thomas Macho). The voice becomes a resonant organ from mother to child.

Looking at the architecture we realize what we see, and we forget the other senses' contribution. The architecture reflects light and does not radiate it, resonates sounds without producing them itself.

Olfactory perception and reception. "The Lord God formed a man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being" (Genesis 2:7). Breathing, a vital process of invisible exchange with the world, has been a sign of life since the creation of the world. It involves systematically inhaling and exhaling, not due to air quality or environment (Rosa: 2019). This invisible relationship is repeated when we open a window to breathe, allowing the world in. We perceive the world through our remote receptors, such as the eyes, ears, and nose (Hall: 1990). Our olfactory and gustatory relationships with the world are established. Then, we are "made of the world" through our food, breath, and drink.

Deleuze and Guattari (1991: 183), define the percept as sensitivity to insensitive forces. Questioning the percept shows that through perception, we can make sensitive the insensitive forces and make visible the invisible sensations that populate the world. These insensitive forces that populate the world affect us, make us "become", and change us.

Visual perception and reception. Sight is the late-developed sense in humans to replace smell. It is the complex sense in humans, replacing smell and providing more effective visual information than auditory and tactile information. According to the Swiss architect Livio Vacchini (1933-2007) in his famous book "Capolavori": "It is magic, the game between the eye that thinks it sees and the brain that thinks it understands" (Vacchini: 2006).

The perception of spaces is restricted not only to the vision of what is perceived but also to what can be eliminated or retained, according to the cultures (Hall: 1990). For example, the "Aivilik" world of perception is different from ours, they are living in an olfactory and auditory world rich in sensations, according to Rasmussen (1964). Modern man is cut off from these sensory worlds, explains Hall (1990).

2.1.2 Affect, Affection, and Experience

Deleuze and Guattari (1991: 176) clearly explain the relationship between art and "Percepts, Affects, and Concepts". They say that Art is the language of sensations. It replaces perception, affection, and opinions with percepts, affects, and blocks of sensations. Therefore, architecture is a monument composed not only of colors, sounds, and stones but it is also composed of a triple entity of percepts, affects, and many sensations. These sensations are stimulated through the senses.

Tactile Experience. According to Georges Braque (1882 - 1963), one of the main founders of Cubism with Picasso: "tactile space separates observers from objects, while visual space separates objects from each other". Knowing that touch is the most intimate sense, allows us to appreciate textures and leave memories of these tactile experiences. On the other hand, the touch of a doorknob under the hand of Peter Zumthor brings him back to the front door of his aunt's garden, and memories of this house resurface: "Even today, this handle seems to me as a particular sign of the entry into a world made of various atmospheres and smells" (Zumthor, 2010). Touch will be able to release our deepest memories, to put them into action, a multiplicity of senses at once.

Olfactive Experience. Human relationships are visual and verbal, when they go beyond, they become tactile and olfactory. They are emotional. We, as humans, are always wrapped in smells. Olfactive experience disconnects the visitor from the space and brings him, by the action of memory, to a desired place, to a sensation, and to the emotions that he finds necessary for experiencing spaces. "I tell myself that architecture should not evoke emotions but let them arise", according to Zumthor (2010: 29), while talking about the smells of spaces.

The Arabs conceived a relationship between a person's mood and his smell, from which we recognize the Arab baths, especially with oriental aromas, having the ability to change and improve the mood.

Affective and Emotional Experiences. Sensory perception is the first and greatest mystery of architecture, connecting materials and things to form a space (Zumthor, 2006). It puts into action a multiplicity of senses at once to form architecture. In the presence of architecture, an experience of life remains alive in our memory. It keeps an imprint in all human body senses, in addition to the soul and the body (Deleuze & Guattari, 1991).

Emotion is a part of our sense of living and our relationship to reality. Zumthor (2010: 19) talks about the artistic qualities of a building and its effects, stating "A building can possess artistic qualities when these diverse contents and forms combine to create an atmosphere that moves us". A sensitive percept of the artistic qualities of the world around us, to the atmosphere of the architecture we experience, sends us affects and emotions that leave their imprints. This reminds us of the French philosopher Henri Maldiney within the concept of "transpassibility" where he describes "sensitive receptivity" as a moment of openness to the world, a genesis of oneself with the world.

Sensation is the percept or affect of the material itself, and its diversity makes it difficult to determine its end and beginning (Deleuze & Guattari, 1991: 166). Material is a machine producing affects, making it difficult to recognize when the sensation was created.

The body. The human body, through its senses, blooms during an architectural experience. It creates new sensations and new affects. It leaves an imprint depending on the sensitivity of the spectator, his life, his mental state, his achievements, his education, and especially his mood (Rasmussen, 1964). Any impressive architectural experience reacts, not only to the physical components of architecture, but also to its atmosphere, ambiance, and above all its beauty because "beauty is a sensation" (Zumthor, 2010: 77).

Zumthor (2006: 17) highlights the components of an affective, emotional, and kinesthetic architectural experience. It includes things, people, air, noises, sound, colors, material presences, textures, and shapes, as well as one's state of mind, feelings, and expectations.

2.1.3 Concept and Theorization

While searching for inspiration for his architecture, difficulties take the architect. "When I work on a project, I let myself be guided by the images and atmospheres that come back to me and that I can associate with the architecture

I am looking for. The images that come to mind are mostly related to personal memories and therefore rarely provided with architectural commentary": according to Zumthor (2010:26). After perception of the facts for construction, a theory composed of images and memories comes to us. The architecture combines multiple components, incorporating experiences, desires, and solutions to create unique and effective buildings.

Theory and criticism. According to Xavier Bonnaud (2011), the theory shows that architecture resembles others while a critique shows what makes it look like no other. No work of art or architecture will be like another. The theory creates the link of resemblance with other works, while the critic denies any link of reference to other works. Subsequently, the experience of one work is not that of another.

Concept. A concept is created when doubt begins. To doubt is to think, and to think is to be.

A concept makes sense when it is associated with one or more problems, and this meaning is only obtained as we think about the solutions to these problems. Thus, even in philosophy, concepts are created depending on the problems, which is the same for architecture. An architecture only makes sense in association with its concept, composed of one or more problems. We add to this concept percepts, affects, experiences, and "*déjà vu*" [already seen].

Wanting to create a house, Zumthor dives into his knowledge to come up with a concept. He says: "Everything that I knew a moment before about the object to be created appears in a new light. Joy and passion win me, and a voice seems to tell me: "This is the house I want to build!" (Zumthor, 2010: 21). A new vision emerges, changing reality and the world around us, giving birth to "The House" with its inseparable components.

To rephrase it in another way, we return to the poem "Bouquet of Roses in Sunlight" by Wallace Stevens. Roses' appearance varies based on perceptions and senses, transcending vision, and problems to arrive at the very concept. A concept will be a sensitive representation of insensitive forces, that manipulates and stimulates our senses, sensations, emotions, affections, and subsequently our affects.

In conclusion, the multi-talented Spanish artist, Picasso (1881-1973) stated: "a painting lives only by the one who looks at it". A house lives only by those who occupy it. It lives when man becomes the blood that flows in the veins of this architecture. The man joins the parts of this house together first by the visual, then by the circulation, the imagination, and even the way of living. Throughout his life, a man gives life to architecture.

In this part, the theory of "Percept, Affect, Concept", was clarified, in dependence of human senses. This allows us to move to the chosen corpus's first Result: Percept and Perception of the presence of nature.

3. Results

3.1 Elements of Nature that made Le Corbusier point out the five elements of Modern Architecture

The "Villa Savoye" built by Le Corbusier between 1928 and 1931, represents the five characteristic points of modern architecture. This villa has engaged nature and created a connection to landscapes that results in a committed nature. It makes us believe in a unity of reason and beauty, by connecting our way of feeling beauty to our way of seeing the world. This relationship hides within it what Le Corbusier was able to create between the different components of architecture and nature.

The "Pilotis" [stilts]. Architecture added to an existing landscape, changes it. A change is there, as in a pond, as described by Zumthor in his book "Thinking Architecture" (2010: 17), "One throws a stone into the water. A swirl of sand rises and then subsides again. The agitation was necessary. The stone has found its place. But the pond is not the same as it used to be".

Referring to the original text of July 24, 1927, on the five points of a new architecture, Le Corbusier raises the ground floor on "Pilotis" to avoid the humidity of the ground. He lets the garden pass under the villa (Oechslin & Wang, 1987). Nature is integrated on the ground floor.

Roof gardens. As well, Le Corbusier creates a duplication of this ground floor nature by roof gardens. In addition to the presence of nature to purify the air, the roof gardens have the function of protecting the reinforced concrete from sudden expansion caused by heat variations. The roof gardens represent Le Corbusier's conviction of the healing quality of a home. It is a regeneration of the inspiring forces and powers of hygienic exposure to the sun.

In his book "The Eyes of the Skin", Pallasmaa (2012) explains limitless space such as in Le Corbusier's "Villa Savoye", moving from the garden to the roof garden, through the building, through the "*promenade architecturale*" [architectural walk] in space and time.

Ribbon windows. Nature is engaged in the interior of the building through ribbon windows, that will serve as frames for landscapes that strengthen the continuum of space. It will thus be an architecture that helps to walk in nature while being inside. Ribbon windows let the vision pass into a panoramic view, or even cinematographic. This same opening reminds us of the American film "Rear Window" by Alfred Hitchcock. In this film, the photographer, in his wheelchair, following an accident, sits behind a frame, a window, and observes the life that happens in frames outside.

These windows make the architecture alive as if it were an animated frame, not frozen in time. Life circulates within the framework of architecture and leads us into the framework of the universe. It varies in the frame and through the frame, in every moment of the day, in every season, in every perception from one man to another, and in every dialogue from one man to another.

The free plane. The free plane, unlike the paralyzed plane, frees up the dimensions of the rooms. In the "Villa Savoye", the ramp becomes the main element of the "*promenade architecturale*" [architectural walk], a vertical circulation space that cuts the horizontal slabs, and leaves the power to discover the space when someone advances vertically in space.

Walking in nature, the trees let themselves grow freely, the branches go in all directions, but a single stilt holds them, and stands vertically connecting all these branches. Consequently, the plane is free. Why release only the plan? Why only horizontally? What if we liberated a façade? Vertically?

The free façade. Knowing the importance of aesthetics and functionality in Le Corbusier's architecture, he created the free façade as a light structure, that allows an extension of the window without interruption, as it also allows a variety of geometric and visual compositions rather than being structurally limited.

The "Villa Savoye" is not only part of nature, but conversely, nature is also part of it. Le Corbusier's integration of nature into architecture in the case of La "Villa Savoye" completes Rasmussen's explanations of the presence of a building in nature or a given environment (Rasmussen, 1964).

Thus, Le Corbusier defines a "*promenade architecturale*" [architectural walk] by its elements of space and time. It is not time that depends on movement, it is movement that depends on time. Zumthor (2006: 41) gives meaning to the space-time relationship by stating: " That means thinking about the way people move in a building, and there are poles between which I like to place my work."

3.2 Integrating architecture into nature makes us feel as if architecture was there first and then came nature.

In the distant valley of Pennsylvania, far from the urban setting, on a rock, a waterfall, Frank Lloyd Wright installed his architecture as a sculpture. The sun timidly penetrates through the thick foliage of the trees, passing through narrow paths, a discovery of clear horizontal lines of architecture through the vertical trees. It is a composition of large horizontal concrete blocks as if suspended from the sky, to keep the waterfall untouchable. According to Zumthor (2010: 29), we must take care of the context of our architecture. Indeed, trees with leafy branches, hide this architecture and prevent it from being so imposing, as if it is an integral part of nature.

Balconies activate visual, olfactive, and auditory senses while contemplating tree changes through the "four seasons". This reminds us of the South Korean film "Spring, Summer, fall, winter... and Spring" by Kim Ki-Duk where the boundaries were the portal by the lake, the mountain, and nature.

The rock on which the "Fallingwater" House was built integrates physically inside the house to partially form the floor of the living room. By describing the interior of the "Fallingwater" House, Rasmussen (1964) shows that with beautiful furniture, textiles, and artwork, along with a top view of the trees, it is a delightful space for living, saturated with quality and culture.

3.3 To be led into space, through human senses that are called into action through the active elements of nature.

Showing the rich lessons learned from Joseph Beuys's works, an artist of the Arte Povera movement, Zumthor is impressed by using materials and their precise implementation. This implementation reveals ancient know-how, without forgetting the becoming of this material. Rasmussen highlights the material as the engine of architecture, giving meaning to the design.

Zumthor's Swiss Pavilion at Expo 2000 used stacked wood, reflecting a childhood image of stacks of planks in a carpentry depot. Sometimes the woods are raw and untreated, other times they are lacquered and reflect light. The reaction of wood towards the elements of nature will then be different.

Zumthor's minimal design structure divides the space into complex subspaces with beams. Steel cables connected to spring-loaded tie rods follow wood's changing nature. Light, wind, and rain are free to enter the exhibition pavilion: the material seems to "breathe" with the natural elements, following their rhythm and capacity for change. Considering the pavilion as a mass of shadow, Zumthor infiltrates the light through openings and walls. He intentionally alternates spaces of shadow as spaces of light, recalling once again the forest where we are sometimes in the shade, and other times under the sun.

This pavilion evokes a kinesthetic experience in the labyrinth, dividing the space into complex subspaces with beams. The pavilion has fifty entrances and exits, varying with climate, seasons, and external factors. The elements of nature are summoned to be an integral part of the "Swiss Soundbox," with the sun providing light and heat, wind transmitting sound and music, water penetrating in the form of rain, earth over the place, emptiness, space, spirit,

and ether animated and interpreted differently by visitors. Visitors can experience thermoception sense of feeling cool inside when the temperature outside is high.

The building's materials, including wood, steel, asphalt, and glass, create a "Swiss Soundbox" that resonates and transmits sounds. Interiors are like large instruments, collecting and amplifying sound, awakening all senses like designing a stage setting or directing a play (Zumthor, 2006).

4. Discussions

The upcoming part of the article deals with the conception essentials for architects within the chosen corpus as follows: the "Villa Savoye" by Le Corbusier, the "Fallingwater" House by Frank Lloyd Wright, and the pavilion of "Swiss Soundbox" in Hanover 2000 by Peter Zumthor. Depending on this, three operational hypotheses arise:

1. Le Corbusier's commitment to nature in the "Villa Savoye" will spark a kinesthetic experience through the "*promenade architecturale*" [architectural walk] and the architectural landscape that reinforces the "five points of modern architecture".

2. Frank Lloyd Wright's integration of nature in his "Fallingwater" House will spark a kinesthetic experience through nature integrated into architecture and architecture integrated into nature.

3. Peter Zumthor's convocation of the elements of nature in his "Swiss Soundbox" pavilion at Hanover will spark a kinesthetic discovery of our inner and outer senses.

The three mentioned buildings were interpreted and analyzed starting from nature to conception: a nature committed at Le Corbusier's, integrated at Wright's, and convoked by all its elements at Zumthor's. The building is an entity strongly located in its surroundings, its site, in the "*Genius loci*" of the place, adding the history of the architect's achievements and experiences so that it becomes what it is. According to Rasmussen (1964), to achieve the best of his constructions, an architect will give "a specific look to the construction. These buildings are elaborated in a certain spirit, and they transmit this spirit to others".

A project designed is a follow-up of social, cultural, and political needs and triggers... etc. An architecture, once well designed, placed, and surrounded, will be legible historically, personally, aesthetically, sensorially, emotionally... etc, as Zumthor said: "A good architectural project involves the senses and intelligence".

While going into the conception of architectural creation, we will refer to Gilles Deleuze & Félix Guattari when they quote the terror of conception in their book "What is Philosophy" (1991: 170) as follows: « *Quelle terreur hante la tête de Van Gogh, prise dans un devenir tournesol ? À chaque fois il y faut le style - la syntaxe d'un écrivain, les modes et rythmes d'un musicien, les traits et les couleurs d'un peintre - pour s'élever des perceptions vécues au percept, des affections vécues à l'affect* » [What terror haunts Van Gogh's head, caught in becoming a sunflower? Each time it takes style - the syntax of a writer, the modes and rhythms of a musician, the features and colors of a painter - to rise from lived perceptions to percept, from lived affections to affect]. The terror of conception haunts every writer, musician, painter, artist, architect, or other. The anxiety of giving birth to a new concept, a new article, or a new architecture, is a crucial phase. This same terror haunts an architect's conception during the process of creation of a building. This makes his life more complex in the becoming of the drawn lines or the chosen material. The concern that a stone will become a bedroom. A piece of wood will become the seat where man will rest with all his fears and emotions. Glass will become the inhabited frame. The void will be populated by "lived experiences", sensations and emotions. Architecture will be an unfinished work and in continuous evolution. "What does it want to become this house, object of use, sensitive body, assembly of materials, solid construction, a product of a composition, brought to a form that serves life?" (Zumthor, 2010: 78).

4.1 A committed nature in the case of the "Villa Savoye" by Le Corbusier

4.1.1 Affections and Affects at "Villa Savoye"

Each architecture is conceived and built not only in space and time but also as a junction of qualities and functions that give value to each other. Never percepts without affects; Affects are a result of percepts. percepts applied to the primary will of the architect, to the concept, creates a dialogue between the architecture and the human senses.

In any study, a reference to history and experience does not always seem to be accurate. Rasmussen (1964) reflects on the differences between eras and generations by saying: "What may be right and natural in one cultural environment can easily be wrong in another; what suits one generation becomes ridiculous for the next when people have acquired new habits and tastes", we are no longer on the same pace, we have changed, we have new achievements, new tastes, and new needs.

To better understand Le Corbusier's architecture, we return to his inspirations of nature and his organic forms. The geometric and organic shapes appearing in his first paintings, later form a frame on the facades of the first house he had built, including La Villa Fallet (1904-1905) in La Chaux-de-Fonds, Switzerland. Consequently, the presence of nature in the conception of Le Corbusier's design was too clear at the beginning.

4.1.2 A conception by a return to experience

To please his mother through architecture and not music, Le Corbusier built the Villa Le Lac for his parents. His mother's discontent pushes him to revolt against his achievements for new concepts in the world of architecture. For this purpose, he uses all his experiences, observations, and perceptions: Nature will be engaged in architecture, according to the five elements of modern architecture in the case of "Villa Savoye". What Le Corbusier had begun at the Villa Le Lac, he completed at the "Villa Savoye".

Digging into the experience, and facing one aspect of the problem, the architect will be able to create and realize the best of his structures.

4.2 Integrated nature in the case of "Fallingwater" by Frank Lloyd Wright

4.2.1 Affects Leading to the Design of the "Fallingwater"

Originating amid the crisis and not by victory, the "Fallingwater" House was designed in Wright's head during his tour of the site including the waterfall in the forests, leaving an acoustic and emotional imprint of the music composed by the waterfall. The waterfall music, the levels of land, the river, and the pool were part of the percepts of the house imagined by Wright. As Deleuze and Guattari (1991) said, they constitute in themselves a monument always in the making.

A monument varies, evolves, or even changes through its surroundings, according to the seasons, to the moment of the day, or even during the night. The "Fallingwater" House by Frank Lloyd Wright, is an integrated entity of its surroundings in its surroundings, an integration, mimesis of construction, a camouflage well succeeded by the stratification of the monument, the chosen materials, the colors, the shapes, the circulations, the frames, the openings through which nature in continuous change can be seen. An unfinished architectural work that never ceases to live through nature in the surroundings.

To showcase nature, Wright did not imitate it, but he created a national monument, an architecture that summarizes the history of American architecture, from wood-frame houses to the return to the roots of ancient Native American sanctuaries. This architecture is placed above the waterfall as a second skin, a second nature; an architecture in symbiosis with nature. It is the best example of harmony between architecture and nature, the rocks are naturally stacked under the light, and they break the calm of the waterfall to form a noisy melody between the levels.

If according to Rasmussen (1964), the architect's job would be to shape the space by eliminating material, Wright did not remove a part of nature, but he just made his architecture a part of the great game of mimesis. Hence, Peter Zumthor (2010: 17) describes the mysterious presence of some architecture as if they were present before the landscape so that you cannot imagine the place without them, "I am as you see me, and my place is here."

The "Fallingwater" House is an integrated, disguised architectural creation that melds nature and materials for a seamless and dynamic experience.

4.2.2 Theorize a concept, a conception.

Like a chameleon, Frank Lloyd Wright integrates his buildings into the nature that surrounds them by creating harmony, such as a house rising into the air when the location is among rocks and trees and extending horizontally when the place is plain. This camouflage succeeds that even Pallasmaa (2012) describes it by saying that it is "a uniquely full experience".

Wright easily designed houses in symbiosis and serenity with nature to stimulate our senses to get in action with the elements of nature, that are as present as architecture itself. The earth is there, like a part of the natural rock that is an integral part of the ground floor. Water, present in the waterfall, arises with its sound system, air as an indoor-outdoor element of the architecture, as well as light, sun, and fire.

Hence, nature will be considered essential for Frank Lloyd Wright's design, all starting from nature and returning to nature.

4.3 Convocation of the elements of nature in the case of Peter Zumthor's "Swiss Soundbox"

4.3.1 Design concepts

According to Rasmussen (1964), architecture is an art of living, he justifies this by saying: "Architecture is a very special functional art; it confines space so we can dwell in it, creates the framework around our lives". It gives a new limit, a new framework to emotions, experiences, and sensations that happen inside. We, people, think of the plans, the frames that circumscribe the volume of the spaces and no longer the walls, nor the structure. This shows our intention to think of space as no longer a volume. Every architect thinks about the construction of his building and does not let go of the final goal, the spaces he wishes to form (Rasmussen, 1964). These spaces communicate strong feelings to us, leaving an impression of space, and printing a pulsation of the mysterious emptiness delimited by architecture (Zumthor, 2010: 22).

Architecture will come from a design of an architect, who is an ordinary man, to be occupied, or even inhabited by other ordinary men. According to Rasmussen "Architecture is produced by ordinary people, for ordinary people;

therefore, it should be easily comprehensible to all" (Rasmussen, 1964). We cite as an example the Bruder Klaus Chapel (2007 - Germany) by Peter Zumthor, where we notice the sequences of concrete poured by the peasants, we notice the layers of time on the facades, that serve to keep these "levels of intimacy" between the architecture and its occupants. Zumthor (2010: 18) always considered the belonging of our sensations and our understandings of the "*Genius Loci*".

4.3.2 The Elements of Nature and the Senses of Man

The elements of nature are summoned to be an integral part of the "Swiss Soundbox": the sun giving light and heat so the temperature of space is created, the wind producing sound and music, the water penetrating in the form of rain, the earth over the place, emptiness, space, spirit, and ether animated and interpreted differently by the visitors of this building because according to Zumthor (2006:69): "Form is not something we work on – we apply ourselves to all the other things. To sound, noises, materials, construction, anatomy, etc."

The "Swiss Soundbox" is recognized as a multisensory event. While passing through the Swiss pavilion, all visitors' senses are on alert. Seeing, reading, eating, hearing, and smelling are the main activities for the discovery of Switzerland inside this pavilion. None is less important than another. All the human senses are in action:

1. The visual sense will be activated by the light and will help to contemplate, stare at, discern, glimpse, or scout the space they cross.
2. The Auditory sense in a forest will make visitors listen to all the sounds of nature to form a harmonious melody. Similarly, in the "Swiss Soundbox", it will be difficult to discern the sound of the building itself, the sounds of footsteps on the ground, the voices of people, the music, the gastronomic sounds of flutes toasting, plates, or even pots.
3. The olfactory sense quickly reveals feelings and memories, bringing us back in an instant to the experience before getting accommodated to the smells, scents, aromatic, and perfumed, starting from food to the structure and its materials.
4. The tactile sense of feet touching the ground, hands caressing the walls, seeking emptiness, feeling the materials and their textures, to see them through our skin.
5. The Taste sense is directly related to the gastronomic presentations within the building. Enjoying Swiss food, and tasting and sipping drinks, stimulate the taste sensation.

But man's senses are not limited to the five already mentioned above. There remain other senses such as thermoception, nociception, equilibrioception, proprioception, the sense of language, the sense of movement, the sense of life, the conceptual sense, and the sense of ego (Gouthière, 2014). There are surely others, but these have been identified and dealt with in Albert Soesman's book: « Our twelve senses: Wellsprings of the Soul » (1998).

Known as the architect of atmospheres, Zumthor designs for a multisensory experience, where the senses are always awake, in continuous action with what surrounds them. He summons at each conception the elements of nature to give birth to this kinesthetic experience. The elements of nature are always present, they form a design essential to the creation of its buildings that speak through their atmospheres to the human senses and sensations. In his project "Swiss Soundbox", we visitors find ourselves in an architectural ballad resembling ballads in the Swiss forests.

This same ballad is conceived differently by Frank Lloyd Wright, during his design of the "Fallingwater" House where he integrates nature into the building and integrates its architecture into nature, of a simplicity and delicacy that does not abuse the presence of this architecture. On the other hand, the latter is an integral part as if it were still there so you cannot imagine yourself in this place without this architecture.

A "*promenade architecturale*" [architectural walk], leading Le Corbusier to self-learn architecture, is always present in his buildings. He declares the five points of modern architecture, as he conceived them as essential to nature and its landscapes. In the same way that he made the perception of nature, he wanted his architecture to be perceived in function and the presence of a committed nature.

We then conclude these discussions by following Deleuze & Guattari's theory of "Percept, Affect, Concept":

1. Perceive the experiences, achievements, and concepts of architects from a well-defined architectural corpus.
2. To receive this information and discern it in these buildings.
3. To show the affections and sensations that went into creating this design.

Deleuze and Guattari (1991: 164) state that this process surpasses all experiences. Sensations, percepts, and affects, are worth by themselves and exceed all experience, they are beyond all experiences, knowledge, and desires. Art or architecture exists through all experiences and leaves us with the imagination to live or plan new experiences that will be beyond our expectations or even far from being realized or lived. All architecture is a substance of sensations,

it exists, and it is shared by theorizing the percepts and affects experienced in the form of concepts and even design essentials.

5. Conclusions

In this article, we have approached a study ranging from the presence of nature in architecture leading to an architectural experience through the human senses.

Knowing how to use our eyes, observing, feeling the harmony of architecture with history and time, inhabiting its spaces, and feeling its ability to contain us, are the natural links that lead us from one architecture to another and from one design to another. According to Merleau-Ponty in his article "The Primate of Perception": "It is not a question of reducing human knowledge to feeling", but it is necessary to reinforce this knowledge by considering the materials that make an architecture, their textures, their effects, their colors, their choices according to light, sun, and wind.

Le Corbusier's architecture favors sight, the kinesthesia of the eye, and the "*promenade architecturale*" [architectural walk], while Frank Lloyd Wright's is based on the multitude of instinctive reactions hidden in the human unconscious. Although the contemporary architect Peter Zumthor enhances the multitude of sensory experiences (Pallasmaa, 2012).

An experience of a work of art or even architecture, always remains alive in our memory, leaving an imprint on all parts of our human body, in addition to the soul, after having detached percepts through perception and affects from affections.

There is no space, but there is a tremendous multiplicity of spaces. This multiplicity of spaces is the subject of architecture, that creates a consistent agreement between man and the world, an intimate relationship between the world and the body, such that this agreement is realized only through the senses. Architecture is the art of reconciliation between us and the world, and it is carried out through the senses. (Pallasmaa, 2012). This multiplicity is none other than an architectural experience.

An architectural experience, unlike any other, engages the whole person, his body, and his soul. It is a personal adventure of an experience, it goes beyond the speeches we can make, it overflows us, and it transforms us. It is the genesis of oneself, the genesis of architectural design.

In his book "The Eyes of the Skin", Pallasmaa (2012: 63) describes the spectator-building encounter by saying: "A building is encountered; it is approached, confronted, related to one's body, moved through, utilised as a condition for other things. Architecture initiates, directs, and organises behaviour and movement". This encounter with the building requires phases essential to the singular experience of architecture, such as perception, reception, affection, and design.

Sight is the noblest sense, but for Descartes, it holds the same importance as touch. But "The hands are the sculptor's eyes; but they are also organs for thought, as Heidegger suggests..." (Pallasmaa, 2012: 56). Then the pleasure of the skin, the pleasure of tactile sensation, becomes a singular sensation.

Le Corbusier (2007) believes in the importance of vision in architectural experience, he believes that architecture is judged by the eyes that see, by the head that turns, and by the legs that walk. Then a Perception followed by an immediate reception (skin, heat, muscle ...) or at a distant one (ears, nose, eyes ...) gives birth to affections and emotions to lead into concepts.

The concept of architecture, after sharing percepts and experienced affects, can be better understood by referring to the concept of a bird as quoted by Deleuze and Guattari (1991) as it is not in its gender or species, but in the composition of its postures, colors, and songs.

In conclusion, an architectural life cycle works both ways, from the perception of facts to an affection created by the project, leading to a concept that will be visible in the architecture. And vice versa, the cycle resumes: perceiving this architecture, receiving it through lived percepts, leading to affects beyond the known, to arrive at the genesis of new concepts, that can make a change in the inhabited world.

We find ourselves in a society that resists celebrating the inessential. Architecture also resists being foreign to its essentials and different from its main tasks. It is no longer a question of style and taste, it is rather a question of belonging, well-being, and atmospheres. It is the question of the future of architectural experience. Do we bear the responsibility of designing our world, a new world, a world in continuous evolution in the continuum of space and time?

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Conflict of Interests

Manuscript title: Experiencing spaces and places through human senses with the presence of nature.

I Hereby, **Darine T. ZACCA**, certify that I have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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