

Where light casts no shadow. One wall, one window, five spaces

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Abstract

The following thesis investigates the *shadow* as an element defining *space* and *time* in architecture. The presence of shadow in architecture and art is studied through concepts from philosophy and anthropology. Darkness does not necessarily mean that a place is not visible but just less visible. By its very nature, the shadow gives a lack of definition to space. Furthermore, because of human perception and vision, the shadow creates a degree of *intimacy* compared to the illuminated space, which reinforces the definition of the space itself and its sensory experience. Here, even an architecture without walls or doors can be defined in different spaces, thanks to the shadow.

This theoretical study complements and anticipates the project of a house on the hills of Roncão, in Alentejo. The project is composed of a wall which, concerning the landscape, creates a space of tension where a path is defined first, and then the inhabited space. The house consists of a wall, a window and five areas. The presence of a single circular opening, which varies the position of sunlight throughout the day, emphasizes the darkness in the house. The shadow is the fundamental element suggesting the most comfortable place and the moment in which to use it. The shadow, therefore, is capable of defining the two themes that compose architecture: space and time.

Keywords: shadow, intimacy, space, time.

Resumo

A presente tese investiga a sombra enquanto elemento essencial para a definição do espaço e do tempo na arquitetura. A presença da sombra na arquitetura e na arte é estudada através de conceitos da filosofia e da antropologia. A escuridão não significa necessariamente que um espaço não seja visível, torna-se apenas menos visível. Pela sua própria natureza, a sombra atribui um certo grau de indefinição ao espaço. Devido à percepção e visão humanas, a sombra sugere também um grau de intimidade em relação ao espaço iluminado, o que reforça a definição do espaço em si, e da sua experiência sensível. Neste sentido, mesmo uma arquitetura sem paredes ou portas tem a capacidade de definir diferentes espaços devido à presença da sombra.

Este estudo teórico complementa e antecipa as intenções do projeto para uma casa nas colinas de Roncão, no Alentejo. O projeto consiste num longo muro que estabelece um momento de tensão em relação à paisagem e cria um percurso, que em seguida dá origem a um espaço habitado. A casa é composta por uma parede, uma janela e cinco espaços. A presença de uma única abertura circular, que faz variar a posição da luz do sol ao longo do dia, enfatiza a importância da sombra nos restantes espaços da casa. Ela torna-se no elemento essencial que define os espaços e sugere o melhor momento para os utilizar. Desta forma, a sombra é capaz de definir os dois temas que compõem a arquitetura: espaço e tempo.

Palavras-chave: sombra, intimidade, espaço, tempo.

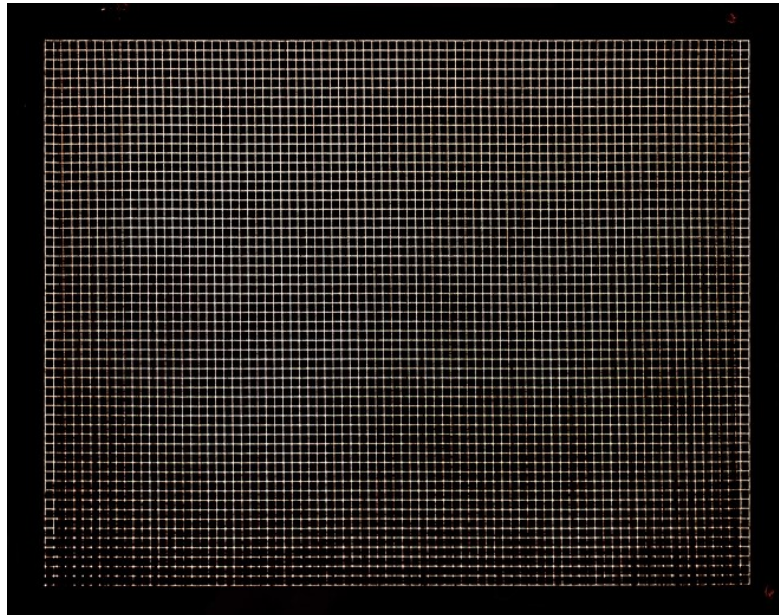
Riassunto

La seguente tesi indaga l'*ombra* come elemento di definizione dello *spazio* e del *tempo* architettonico. L'*ombra* è qui studiata nell'arte e nell'architettura attraverso concetti di filosofia e antropologia. L'oscurità non significa necessariamente che uno spazio non sia visibile, semplicemente diventa meno visibile. Per sua natura, l'*ombra* attribuisce allo spazio un grado di indefinizione allo spazio. L'*ombra*, inoltre, per via dell'umana percezione e visione, crea un grado di *intimità* rispetto allo spazio totalmente illuminato. Ciò rafforza la definizione dello spazio stesso e la sua esperienza sensibile. Ecco che anche un'architettura senza muri né porte può essere definito in spazi diversi grazie alla presenza dell'*ombra*.

Lo studio teorico completa ed antecipa il progetto di una casa sulle colline di Roncão, in Alentejo. Il progetto è composto da un muro che in relazione con il paesaggio crea uno spazio di tensione dove viene definito prima un sentiero e poi lo spazio abitato. La casa è composta da un muro, una finestra e da cinque spazi. La presenza di un'unica apertura circolare, che varia la posizione della luce solare nell'arco della giornata, enfatizza il buio nella casa. L'*ombra* è qui l'elemento fondamentale che suggerisce lo spazio più confortevole e il momento in cui usarlo. L'*ombra* è quindi capace di definire i due temi di cui si compone l'architettura: lo spazio ed il tempo.

Parole chiave: ombra, intimità, spazio, tempo.

“What men call the shadow of the body is not the shadow of the body,
but is the body of the soul”. Oscar Wilde



Where Light Casts no Shadow¹

Genesis

“In the beginning when God created the heavens and the earth. The earth was a formless void and darkness covered the face of the deep, while a wind from God swept over the face of the waters. Then God said: “Let there be light”. And there was light. And God saw that the light was good and God separated the light from the darkness. God called the light Day, and the darkness he called Night. And there was evening and there was morning, the first day.” (Gen 1, 1-5)

The darkness does not exist. From a physical point of view, obscurity exists only as the absence of light. Therefore, there is only light in its degrees of intensity and nuance.

It is curious to note how, in his daily life, the human being experiences the dark and how much it affects him. The shadow is something little studied in Western culture which has always preferred light for cultural reasons, perhaps of religious origin. Even thinking about architecture there have been cultures much more interested in darkness. In the traditional Japanese culture, the theme of the shadow is the most characteristic and sentimentally most felt by people. Paraphrasing Jun'ichirō Tanizaki: “Even westerners have lived for long centuries without electricity [...] I don't think, however, that they loved

the shadow as much as we do”². The Japanese author tells in his essay *In Praise of Shadows* how devastating the introduction of electricity into traditional Japanese architecture and culture has been.

Western man, proud promoter of technology and new sources of energy, has been increasingly attracted to clear, well-lit and visible things. Las Vegas is the most emblematic and exasperated example of this. Robert Venturi in his book *Learning from Las Vegas* (1972) describes a city defined by illuminated signs. It is a city that vanishes the moment the signs are turned off. What remains is the Mojave desert. Here then arises the desire to discover something more on the theme often overlooked in the history of western architecture: the shadow.

Fragment I. Wisdom of the body. Primitive culture

“Who knows but if men constructed their dwellings with their own hands, and provided food for themselves and families simply and honestly enough, the poetic faculty would be universally developed, as birds universally sing when they are so engaged? But alas! We do like cowbirds and cuckoos, which lay their eggs in nests which other birds have built, and cheer no traveler with their chattering and unmusical notes. Shall we forever resign the pleasure of construction to the carpenter?” Henry David Thoreau

The architecture of traditional cultures is linked to the wisdom and instinctive knowledge of the body. Primitive man developed architecture in different places, cultures and materials but always placing the body at the centre of the composition (PALLASMAA, 2005: 26). Primitive man, like today's indigenous people, tended to build the spaces of the house and the village around their bodies, basically in circular spaces. This attitude recalls the bird that builds the nest around itself. The bird, like man, has the primary need to protect himself and his family from wild nature. In every continent of the earth, the reasons change but not the instinctive and necessary need for protection. By actually building around the body is the most effective way to respond to this primordial need.

In the North American continent many Indian tribes have developed materially different but conceptually very similar types of residences. In the Arctic Region (Alaska, Northern Canada and Greenland) the local tribes, the *Inuit* and the *Yupik*, better known by the term *Eskimos*, live by hunting. During the summer they lived in tents and in the winter in houses built with blocks of ice called *Igloo*. Further south, nomadic populations lived in the large grasslands that extend from present day Central Canada to Mexico and the Midwest to the Rocky Mountains following the large herds of bison. As hunting was the main food resource until the nineteenth century, the tribes needed flexible and light housing to allow continuous movement. The *teepee*, an Indian tent consisting of a wooden structure and internal and external covering leathers, perfectly responded to the needs of the nomadic tribes.³ This type of tents, although with different shapes and forms, have been used for millennia also in North Africa as well as in Asia, typical especially of the Mongolian tribes.

In other regions where, instead, where the main source of food was agriculture or harvesting, settled populations tended to build houses made of earth, wood and straw.

Therefore, in all North American Aboriginal realities, we find an architecture of reduced size, with a tendentially circular plan, built around the body.

In Europe, there are many cases of archaic architecture that use the same constructive approach: the Celtic huts and the various primitive tribes do not differentiate much from those already mentioned. However, among the archaic constructions of megalithic civilizations, buildings of stone houses still exist today. Among these are *talyots* in the Balearic islands, *nuraghi* in Sardinia and *sesi* of Pantelleria, a small island south of Sicily. A curious case are *trulli* that are found in Puglia in the south of the Italian peninsula dating back to the fifteenth century. These are dry-built rustic stone constructions usually with a circular plan. The roof is made of roughly squared stone slabs, arranged to form a conical cusp. The external surface of the domes is covered with thin stone slabs while the internal walls are plastered and whitewashed.⁴

This instinctive and physical constructive approach can be found also in Africa, particularly in a shepherd village in present day Zambia. The houses are still huts with a thatched roof and a circular base made of mud. These are arranged in a circular way to enclose the huts of the chief tribe and his wives which, in turn, form a smaller circle in the centre of the village (RUDOFISKY, 1954: illustration 133). With the tribe chief's enclave in the centre of the village, space hierarchies are also defined. In this case, the body's approach to the centre of the design and construction action of the house has expanded to the overall context of the village which functions as a single body.

On the African continent, in northern Cameroon, there is another ethnic group called *Kirdi*, which lives in the Mandara mountains. In the friendly climate where these tribes live, the house is limited to a shaded roof and sunshade walls (RUDOFISKY, 1954: illustration 143). This type of architectural approach recalls the Japanese tradition. The Japanese novelist Tanizaki writes about it: "we first spread a parasol to throw a shadow on the earth, and in the pale light of the shadow we put together a house" (TANIZAKI, 1977: 28). In both cultures, the development of the home space arises from a covering that wraps the body in the shade.

The study of the cases listed above shows that rural houses, although different in materials and composition, are all united by the same constructive approach. In all continents of the Earth, the architecture of traditional cultures is linked to the instinctive wisdom of the body. The indigenous house develops around man, who is physically at the centre of constructive action. This approach makes the archaic architecture deeply plastic and intimate.

Fragment II. Vision is knowledge. The predilection of sight in Western thought.

"Die Hände wollen sehen, die Augen wünschen zu streicheln". Johann Wolfgang von Goethe⁵

Since ancient times, local culture has influenced and changed the architecture. In Western history, there are three main moments of *cultural revolution* that influence society and architecture like never before: in the Classical age with Greek philosophy, in

the Renaissance with perspective representation and in the Modern era with the technological revolution.

During Ancient Greece, the western man began to consider sight as the most important sense. Reality is more immediate and understandable through the eye. In support of this, the philosopher Heraclitus wrote: “The eyes are more exact witnesses than the ears.” (Heraclitus, Fragment 101a *apud* LEVIN, 1993: 1.) Aristotle also sees sight as the best sense on which to base thought “because it approximates the intellect most closely by virtue of the relative immateriality of its knowing.” (Flynn Thomas Rober *apud* LEVIN, 1993: 274)

In general, Philosophical writings like the Myth of the Plato’s Cave⁶ are constantly enriched by metaphors and ocular reasonings, where light is a metaphor for truth and knowledge itself is synonymous with clear vision (PALLASMAA, 2005: 15). Even in monotheistic religions, light is equated with divinity. The Old Testament, like other ancient sacred texts, is full of stories where God is represented by light (PLUMMER, 2013: 4).

The german philosopher Peter Sloterdijk, explains the relation between sight and thought: “The eyes are the organic prototype of philosophy. Their enigma is that they not only can see but are also able to see themselves seeing. This gives them a prominence among the body’s cognitive organs. A good part of philosophical thinking is actually only eye reflex, eye dialectic, seeing-oneself-see.” (SLOTERDIJK, 1994: 21).

As pointed out in the philosophical essays *Modernity and the Hegemony of Vision*: ancient Greek thought first and then all Western culture has been dominated by a vision-centred interpretation of knowledge, reality and truth (LEVIN, 1993: 2)

The influence of vision-centred philosophical concepts has also influenced classical architecture. Juhani Pallasmaa wrote: “Greek architecture, with its elaborate systems of optical corrections, was already ultimately refined for the *pleasure of the eye*.” (PALLASMAA, 2005: 26).

In the design of the sacred building, there is the main example of the search for visual perfection of the Greeks. The temple is governed by two key concepts: *symmetry* and *eurythmy*. According to the Roman historian Vitruvius “Symmetry is a uniform agreement between the members of the same work” while eurythmy is “the beautiful and grateful aspect caused by the arrangement of the members” which are in proportion to each other (VITRUVIUS, Book I, Chapter II).

The concept of eurythmy derives from those *optical corrective* measures which, by increasing or decreasing the dimensions, which would be corrected from an objective point of view, neutralize the subjective alterations of the work of art.

The best-known optical correction is the *entasis*: the swelling of the column at $\frac{1}{3}$ of the height. This ploy was used to eliminate the optical illusion that makes the central part appear narrower than the ends of the column. Again, for an optical illusion, the base (stereobate and stylobate), entablature (architrave and frieze) and pediment seem to curve when viewed from a distance. To correct the deformation, the Greek architects curved the horizontal elements upwards, to appear perfectly rectilinear. The external



columns also undergo an optical deformation appearing straight and parallel but inclined towards the outside. The external columns are then inclined inwards to make them seem straight and perpendicular to the base.

The light creates an optical illusion that makes the illuminated columns appear thinner than those in the dark. For this reason, columns with a larger diameter are placed in the brighter areas of the temple. In this way all the columns appear of equal size. Finally, the center distance between the columns is also correct for the distortions due to light. The intercolumniation is greater between the columns at the cell, while it is reduced between the lateral columns.

The result is a paradox: the temple is, according to Greek canons, perfect for the sense of sight but physically *asymmetrical* and *arrhythmic*.

In the Renaissance, architecture was influenced by *perspective representation*. The dialectic of the eye finds a moment of maximum expression in the new drawing technique of the city. The eye is alone and at the center of the representation and perception of the world. About this, Leon Battista Alberti writes: "painting is nothing but the intersection of the visual pyramid following a given distance, a fixed centre and a certain lighting" outlines the perspective paradigm which also became the instrument of the Renaissance architectural thinking (ALBERTI *apud* LEVIN, 1993: 64).

Alberti's vision can be found in the theoretical studies and paintings of the *Ideal City* realized in 1484 probably by Luciano Laurana. The relationship between the city and the observer at the center will influence the centuries to come. The triumph of this spatial concept will take place in the construction of the Palace of Versailles in France in the 17th century. Sight is no longer just the favorite way to know reality but also to plan it, influence and educate people, all this at the expense of the other senses. As Pallasmaa summarizes: "There is no doubt that our technological culture has ordered and separated the senses even more distinctly. Vision and hearing are now the privileged sociable senses, whereas the other three are considered as archaic sensory remnants with a merely private function, and they are usually suppressed by the code of culture." (PALLASMAA, 2005: 16).

With the perspective representation the subjective visual impression is rationalized to create an empirical world which is, at the same moment, *infinite*. The passage from the psychophysiological space to the mathematical space is therefore achieved: in other words, an objectification of subjectivity (PANOFSKY, 1991: 31).

"Thus the history of perspective may be understood with equal justice as a triumph of the distancing and objectifying sense of the real, and as a triumph of the distance-denying human struggle for control; it is as much a consolidation and systematisation of the external world as an extension of the domain of the self." (PANOFSKY, 1991: 67).

In the Renaissance, optical illusions and visual distortions are also investigated. The first known example is the work of Bernardo Rossellino for the design of Piazza di Pienza. Built between 1460 and 1464, at the request of Pope Pius II, the square is surrounded by several buildings designed by the Italian architect: a church and three palaces. The project area is small, narrow on one side by the main street and on the opposite side by a cliff. According to the natural point of view, the parallels appear to join infinitely and



therefore in Pienza, if the square had been rectangular, the side buildings would have given the impression of converging towards the Duomo. This would have reduced the already contained size of the square and removed the Cathedral at the bottom. The square is then resolved with a trapezoidal shape. In this way, for those who come from the main street, the perspective is reversed. By reversing Rossellino's perspective, correcting the optical deformation, illusionistically widens the square and gets the facade of the Duomo closer, which acquires grandeur and monumentality.

This compositional idea was utilized later by Michelangelo to design Piazza Campidoglio in 1536 and by Bernini for the *Sagrato* of St. Peter's Basilica in Rome in 1656. Particularly important was the case of Bernini who, designing the trapezoidal churchyard, gave the faithful the perception of greater closeness by the Church and the Pope who embraces the faithful.

In the Renaissance spread also the art of *trompe l'oeil*⁷. This technique, perfectly integrated with the vision of the *Cartesian eye*, allowed Bramante to use the perspective technique to create the illusion of a space that does not exist. The most renowned example is the false apse of the Church of Santa Maria at San Satiro realized in 1482 in Milan.

The history of western urban planning has been characterized since the times of Vitruvius by the visual paradigm. As defined by Jean Starobinski, cities plans are idealised visions seen through the *regard surplombant* (the look from above) (JAY, 1994: 19).

This happens in the cities of Roman military foundation, in the *Ideal Cities* of the Renaissance, in the colonial cities, up to the zoning of Modern Functionalism. This planning seems to give the eye more satisfaction by creating "clean" spaces than guaranteed design quality. An explanation of this approach by Le Corbusier which comes to the radical and violent affirmation "I exist in life only if I can see."⁸ It is in modern architectural thought that we come to the consideration of sight as a total and unique tool for analyzing and composing space. Le Corbusier adds "I am and I remain an impenitent visual, everything is in the visual" (CROSET, 1987:115); "One needs to see clearly in order to understand" (LE CORBUSIER, 1959: 231) and "Architecture is a plastic thing. I mean by plastic what is seen and measured by the eyes." (LE CORBUSIER, 1959: 191). The eye is the sense of modern theory. Modern Architecture is the *Architecture of the Eye*.

This vision is the result of the technological revolution that began centuries earlier. Martin Jay in his book *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, explains that the subjects in which the hegemony of vision of Western culture developed are manifold. These include the invention of printing, artificial light and photography. Michel de Certeau adds: "From television to newspapers, from advertising to all sorts of mercantile epiphanies, our society is characterized by a cancerous growth of vision, measuring everything by its ability to show or be shown, and transmuting communication into a visual journey." (apud PALLASMAA, 2005: 24).

As described by Italo Calvino, modern man relates to a constant "an unending rainfall of images." (CALVINO 1988: 57). Today's architecture makes the psychology strategy of instant persuasion typical of advertising its own, leaving out the plastic and profound

experience. The buildings are depleted becoming flat and unreal. The architectural construction appears as an intangible reality: a *scenography* for the eye.

The images of contemporary architecture are now strengthened by the use of artificial materials that make lose the sense of materiality. Natural materials such as stone, wood and brick do not hide their changeable essence: age, history, origin. On the contrary, artificial and prefabricated materials such as glass and plastics present their surfaces as always new to give the appearance of an image and perfection (PALLASMAA, 2005: 32).

Besides, man moves within the city with motorized and fast systems. The city is no longer perceived as a single body but as a series of images. This weakens sensitivity, the human ability to participate and empathy for reality. The city of images appears to complete the epistemological cycle that began in Greece with classical philosophy and *optical corrective* measures (PALLASMAA, 2005: 30).

Reflecting on these themes, Maurice Merleau-Ponty inspired his entire philosophical work against the “Cartesian perspectivalist scopic regime” and “its privileging of an ahistorical, disinterested, disembodied subject entirely outside of the world.” (MARTIN, 1988: 10). The French philosopher instead of the distant *Cartesian eye*, promotes a *embodied view*, bringing attention to the tactile vision and bodily experience: “Our body is both an object among objects and that which sees and touches them.” (DREYFUS and DREYFUS, 1964: XII).

Modern projects tend to favor the sight over the experience of the other senses. This makes the architecture cold and separate from man. The space is “clean” and perfectly legible to the eye but, at the same time, it is not completely understandable to man as it cannot be experienced in depth through the other senses. Anthropologist Ashley Montagu states: “We in the Western world are beginning to discover our neglected senses. This growing awareness represents something of an overdue insurgency against the painful deprivation of sensory experience we have suffered in our technologized world.” (MONTAGU, 1986: XIII).

Ultimately, the western research of architectural space is expressed by Hilberseimer’s intention to create a place completely visible and controlled by the eye, maden of only light without shadows (RILEY, 1995: 90).

Fragment III. Art of the invisible. The hidden dimension

“L’essentiel est invisible pour les yeux.” Antoine de Saint-Exupéry

Sight is the sense that investigates and controls space, defining distance. Touch perceives affection and intimacy, defining closeness. As Pallasmaa says, during strong emotional experiences, man instinctively finds necessary to close his eyes. When man dreams, relaxes, listens to music, caresses or kisses the body of the beloved, he closes his eyes. This is done to prevent eye control and distance perception. Darkness is essential to lose control, create ambiguity of depth and suggest tactile fantasy (PALLASMAA, 2005: 46). Dreams and imagination are stimulated by shadow and

dimness. The darkness that in western culture has been a metaphor for ignorance and sin for millennia, is the favourite medium of fantasy and *eros*. A dark church with soft rays of light that illuminate the altar is spiritually more stimulating than a totally illuminated church. On the contrary, uniform and constant light in space is excellent for working. Sacred places tend to be dark while shopping centres are so illuminated that there are no shadows. Strong and constant light is for producing and selling while darkness is for dreaming and living deeply.

The blurred image, dark and unclear to the eye, creates mystery and awakens the imagination. It is on this concept that traditional Chinese landscape painting, known as *shan shui*, “mountain and water” is based. The *yang* is represented by the high and imposing mountains, while the *yin* by the water, pure and delicate.⁹ The painting is partly faded by fog which makes part of the landscape invisible. The painting remains in mystery as well as its deepest meaning.

Impressionism spread in Europe inspired by the Romantic culture of the time and, often not said, by the paintings of the Chinese tradition. Impressionist painting is based on the concept of denying the importance of the subject and on the indefiniteness that arouses mystery. What is perceived as undefined is *unfinished*, that is, endless: *infinite*.

This approach creates works of art that cannot be controlled and defined by the eye, with a slight but strongly evocative impact. The only way man has to understand Impressionist art is the intimacy of his own dreams. Where eyes do not see clearly, dreams define a trait of immortality.

One of the great protagonists of the art of shadow is Caravaggio. The Italian artist is an exponent of the art of *chiaroscuro* and perhaps the greatest master of the shadow in pictorial art. The shadow is so dark as to better define by contrast the subject of the painting which is well lit. From the deep shadow, an extraordinary sense of presence emerges and the whole context around the subject is as if aspired into the dark. The shadow defines the space around which the action takes place and gives strength to what is in the light. According to historian Paul Veyne, Caravaggio strips the event from the draperies that trivialize and rationalize it (VEYNE, 2010: 12). When the light is stronger, the shadow is darker and the body is enhanced.

Pliny places the Myth of the birth of Western art in a shadow. He says that the girl from Corinth, desperate for the departure of her beloved, with a charcoal in one hand and a lantern from the other takes up the shadow on the doorstep. Father Butade, a potter, will coat this figure with clay making it a stele to be placed in the temple (PLINY, the Elder XXXV: 15-151).

Mario Martinelli, contemporary Italian artist, takes up the myth of the shadow to return to the essence of man. By night, like the Corinthian girl, he captures the people’s shadows; during the day, like Butade, he creates the silhouettes of shadows made of wire net, intended for the walls of cities. The artist travels the world with an installation consisting of a cloth and a lamp. As people pass by, the lamp casts, with a flash, the shadow that remains impressed on the cloth for a long time. The shadow, detached from the body’s movement, lingers on the screen and appears as the other, true self, right before fading away before the eyes of the one who’s just discovered it.

The result is a new and shocking visual experience: the confrontation between the man and his shadow. The shadow is then covered by a metal mesh that is made of emptiness rather than full. Like Lao Tse's glass, what matters is what is not there: the absence (MARTÍN, 2003: 51). In a world of too many things and too much noise, emptiness and silence is a profound and intimate revolution (MARTINELLI, 2020).

Another painter who used shadow as a powerful and evocative means of communication is Giorgio de Chirico, artist of the 20th century. He says: "In the shadow of a man walking in the sun there are many more riddles than in all religions of the past, present, and future." (DE CHIRICO, 1966 245).

Shadows are strong and enigmatic narrative elements for the artist. His metaphysical painting empties people's squares and fills them with mysterious shadows. Often the origin of shadows is unknown because they are hidden by some building or because they are out of sight. In *Melancholia*, there is a shadow that stretches from the pillar without however revealing the subject. In *Il Profeta* one wonders who the human shadow is on the right and also in *Melanconia dell'uomo politico*, two shadows of unknown characters appear. Who are these people? Where do they come from?

De Chirico's shadows are rarely drawn following the rules of perspective, often having exaggerated and illogical forms that accentuate the mystery. These painted doubts are puzzles that seem to herald something that is about to happen, arousing a sense of anticipation and anguish.

Through his bizarre paintings made of illogical perspectives, unreal colours, empty spaces and silence, the artist represents the world as an illusion. The art of the shadow shows an unknown and enigmatic reality, hidden behind the appearances of the world.

In *Mistero e malinconia di una strada*, where a road divides two complementary areas, one illuminated and one in the shade. As usual, the story takes place in an empty space disputed between light and dark. The girl is the protagonist of the painting, innocent and joyful, she runs towards the other subjects of the story: two distant shadows. As Stoichita writes: "Everything takes place on the level of a conflict of shadows: the young girl looks as though she were made of the same substance as the silhouette lying in wait for her round the corner of the street. She is an active element (accentuated by the raised foot; her hair and dress float in the breeze), whereas the silhouette is watchful, passive." (STOICHITA, 1997: 145). In this work, the two concepts of de Chirico's metaphysical painting are perceptible: the enigma and melancholy. Inspired by the philosophy of Schopenhauer and Nietzsche, the artist transforms the *non-sense* of life into art. The artist shows the lack of sense of being and the tragedy of existence through doubt and an enigma. Protagonists of this tale are the shadows, bearers of this mystery. After abstractionism had dematerialized it, the subject returns as a bodiless shadow that brings with it all the melancholy sentiment of modern man.

Emilio Isgrò, known for his *cancellatura* or erasure technique, is another painter of the dark but with a different approach. In the sixties, he began to realize and publish his first works, including *Libro cancellato*. The artist deletes a page underlining words with a black marker. Leaving aside only a few words, he composes a new sentence. On that page, nothing is written anymore as it is almost all erased but at the same time, anything is potentially written. "Erasure is like zero in mathematics, called to form all numbers and

values by itself".¹⁰ Isgrò's intention is not to eliminate what is written but, paradoxically, to give a new identity to words and signs. Just as Lucio Fontana with his cuts and holes formalized a concept beyond the surface of the canvas, so does Isgrò with the erasures. Cuts and erasures face the urgency of practising painting through a new language to evoke something still unknown.

In *Where is Agadir?* a world map where all the names are erased. Suddenly a planet without names and countries is rediscovered where everything returns to its natural state. Every land becomes virgin and every place opens up to new identities. Finally, the most radical work is *Dichiaro di Essere Emilio Isgrò*. Here the artist, in black ink, certifies his self-cancellation and, somehow, his rebirth (KAHN, 2013 [1969]: 31).

The art of shadow was started in the Myth of Pliny and then changed over the centuries and millennia with different techniques and cultural influences. Despite the change in the theme of darkness, it remains the same: man has a natural propensity to close his eyes to dream and is attracted to the dark and its mystery. The art of darkness makes something invisible to the eye but paradoxically opens up a new world visible to the imagination. In the darkness, it is possible to see things that are not revealed into the light.

Fragment IV. Architecture of silence. The culture of shadow

"The most wonderful aspects of the indoors are the moods that light gives to space. The electric fights the sun. Think of it. I am reminded of Tolstoy who deviated from faithlessness to Faith without question. In his latter state he deplored the miracles saying that Christ has radiance without them. They were like holding a candle to the Sun to see the Sun better." Louis Kahn

Darkness has many *nuances*. The shadows constantly change during the day in position and intensity: sometimes they are barely perceptible, while other times they are superimposed and dense. The architecture of the shadows is made up of spaces where the light delicately emphasizes the nuances of the darkness and the gradual passage between the shadows. There are places where light only serves to know how dark a place is.

In 1969 Louis Kahn gives a lecture at the ETH in Zurich, giving a talk entitled *Silence and Light*. The American architect describes architecture as the union of two parts: the unmeasurable, for that which is not yet; and the measurable, for that which is. *Silence* is used to represent the unmeasurable and *Light* for the measurable. In his opinion, to create an architecture it must first be imagined in its conceptual being, in the unmeasurable. Successively, the measurable construction is built and, only in the final experience, is possible access back to the original idea: the unmeasurable. In the end, Kahn defines architecture as existing in the transition between silence and light, which he called the *Treasury of the Shadow* (LOBELL, 1985: 3).

When the noise of the construction works ends and the workers cries cease, a building becomes a silent waiting monument. Every man can experience this condition. The silence of the Pyramids seems to be possible to feel it while that of the Gothic cathedrals seems to be able to hear it. Even just an old house gives a perception of calm and

returning to the silence of the past. This is a significant experience because the silence of architecture is a sensitive silence, which revokes and silences any other noise; it attracts man to his existence and fundamental solitude (PALLASMAA, 2005: 51).

About this Pallasmaa states: “The most essential auditory experience created by architecture is tranquillity. Architecture presents the drama of construction silenced into matter, space and light. Ultimately, architecture is the art of petrified silence.” (PALLASMAA, 2005: 51).

According to Kahn, silence and light are the essence of things. His epic description aims to return to the origins of things and to build an essential world of primitive light and darkness (FUTAGAWA, 1994: 322).

Silence is often associated with the idea of emptiness. That is experienced in a subjective way: it can activate consciousness, meditation, or generate a negative feeling of absence (ESPUELAS, 1999: 12). Silence gives a sense of immateriality to space and characterizes it as endless.

In the west, empty space is considered simply as an intangible object outlined by material surfaces. Japanese thinking, on the other hand, understands space in terms of dynamic interrelations (PALLASMAA, 2005: 64). This idea of space is given by the concept of *ma*, which sees space not only as a negation of matter, but also as a positive dynamic event. This connects space with time, in fact, the concept of *ma* describes space through a meaning of interval (temporal concept) in which things happen (OSHIMA, 2009: 159). For this reason, Professor Fred Thompson, talking about *ma*, uses the notions of *spacing* instead of space, and of *timing* instead of time (THOMPSON and THOMPSON, 1981: 68-70).

In *Japan-ness in Architecture*, Arata Isozaki writes that at the 1978 Automne Festival, with his installation “*Ma: Space-Time in Japan*” he explained the idea of Japanese space and time with a formula to a Western audience (OSHIMA, 2009: 156):

Time = (Greek) *chronos* + *ma*

Space = void + *ma*

This idea of space originates from the ancient Japanese deities: the *kami*. The model for these deities was the sun that defined space and time through its movement. The presence of the gods was inferred from the contrast between day and night, light and darkness. This vision of the gods created rituals that strongly influenced the conception of the architectural space of the ancient Japanese (OSHIMA, 2009: 156). The definition of the architectural space, in fact, takes place in the movement of light and shadows.

Ultimately, *Ma* is latent empty space, inactive and silent awaiting change. At any moment it can be activated and transformed: it is a catalyst for events. This space is not, as has often been understood in Western culture, the space of negation. Frank Lloyd Wright, sensitive to the themes of Japanese architecture, expressed himself by remembering that emptiness was a positive space opposite to negation or non-existence (KEVIN, 2000: 124-126). Resuming Lao Tse: “The reality of the building does not consist of the roof and the walls but the space within to be lived in” (WRIGHT, 1945: 40-41).



In the cradle of the Western world, more precisely in the Mediterranean lands, the architects *modus operandi* is intrinsically linked to the natural space made of intense lights and defined dark shadows. Yoshinobu Ashihara, in the book *The Hidden Order*, recounts the experience of Mediterranean light and shadow so different from his homeland. The Japanese architect writes that in Italy, Spain, and among the islands of the Aegean Sea, he has become aware of the absolute contrast between sunlight and shadow. The air is described as dry, while the sun is strong and everything is contrasted both in the sun and in the shade: there is no blurry area in which the two mix. Resuming Marcel Breuer, Ashihara describes the places reserved for the spectator of the *corrida* as either in the shade or under the scorching sun. The two light and dark shades always seem to be juxtaposed against each other, and the contours of a sculpture under the strong Greek sun are defined in extreme contrast (ASHIHARA, 1989: 33). Inspired by this nature, Le Corbusier defined architecture like the relationship between volumes and light. A light which is that of the Mediterranean sun: where the difference between shadow and illuminated space is clear and the more the light shines, the darker is the shadow it produces (VALERO, 2004: 29).

On the other hand, since ancient times, light and shadow have an important symbolic value in the relationship between Man and Nature. In the Newgrange, an astronomical site built in Ireland between 3300 and 2900 BC, on the day of the winter solstice, a beam of light penetrates through the constructed passage and illuminates the darkness of the underground chamber. The light not only illuminates and defines the space but through the design study linked to the winter solstice, it also defines time (ESPUELAS, 1999: 23).

The site of Stonehenge, in England, realized between 2400 and 2200 BC, is also significant. The architecture is composed of large monoliths erected to form circles, topped by colossal lintels of the same material. Although its function is not yet clear, it is also considered an astronomical centre for its alignment with respect to the solstice and equinox points that underline the passage of time through the play of light and shadow. Already in these ancient architectures is evident that, as the philosopher Karsten Harries thought: the light reminds man that the language of space is also that of time. Since the shadow is part of the light, it's possible to say that the darkness reminds man that the language of space is also that of time (MCCARTER; PALLASMAA, 2012: 47).

Nevertheless, for cultural and religious reasons, the attention of Western architecture has focused on light and rarely on the shadow. But from the second half of the 18th century, the shadow became important as an element for architectural representation. The architects are inspired by the shadows of the scenographic studies of the late Baroque period and the imaginary views of Giambattista Piranesi. Ultimately, it is in the graphic work of Étienne-Louis Boullée that European architects begin to investigate not only drawing but also the themes of shadow in architecture (SAINZ, 1990).

According to Boullée, beauty, in all the arts, doesn't derive from man but from nature and he declared himself the discoverer of the *Architecture of the shadows* (BRAHAM, 1980: 115).

Boullée wrote in his *Architecture: essai sur l'art* when he experienced this discovery: "I was in the country, on the edge of a wood in the moonlight. My shadow produced by the light caught my eye. [...] The shadows of the trees etched on the ground made a most profound impression on me. My imagination exaggerated the scene, and thus I had a

glimpse of all that is most sombre in nature. [...] Nature offered itself to my gaze in mourning. I was struck by the sensations I was experiencing and immediately began to wonder how to apply this especially to architecture. I tried to find a composition made up of the effect of shadows.” (BOULLÉE, 1976: 81-116, 106).

The works in which the French architect most expresses his reflection on the shadow are the Cenotaph for Isaac Newton and The Palace of Justice. For the funerary monument, Boullée conceives an architecture consisting of a flat, bare and unadorned surface, absolutely devoid of detail, with a decoration made of shadow games defined by even deeper shadows (BOULLÉE, 1976: 81-116, 106).

In the project of The Palace of Justice, Boullée through the manipulation of bold masses and shadows, he realizes the metaphor of light and shadow in Western culture by contrasting the brilliant light of Justice and the darkness of the cells: “I decided that I could incorporate the Poetry of architecture by placing the entrance to the prisons underneath the Palace. It seemed to me that if I placed this august Palace above the shadowy lair of crime, I should not only show to advantage the nobility of the architecture on account of the resulting contrast, but I should also have an impressive metaphorical image of Vice overwhelmed by the weight of Justice. [...] I decided I would place the entrance to the prisons at ground level, as if they were the precarious tomb of criminals.” (BOULLÉE, 1976: 98-99). In these two works Boullée uses darkness as a negative architectural element to fill empty spaces with a negative function, manifesting the negative perception that westerners have of obscurity.

In Japanese culture, emptiness and darkness have a very different role. It is important to say that traditional Japanese architecture doesn't have to be lived for the *visual appearance* but for the *sensory experience*. This experience is connected more to the world of shadows, full of symbolism and meaning, than to that of light. This is inextricably linked to the natural context and the climate of origin. In Japan, the light is very different from the Mediterranean one: lights and shadows seem to be dilute in a gradation of different shades like poised at the very edge between liquid and air (TANISAKI, 1977: 16).

Inspired by this, Ashihara describes the beauty as a drawing of shadows, a *chiaroscuro* produced by the juxtaposition of different substances where the darkness is used to empathize the space. Like a phosphorescent stone emits radiation when placed in the dark and loses its charm as a precious jewel when exposed to full light, the beauty loses its *raison d'être* if the shades of the shadow are deleted (ASHIHARA, 1989: 21).

Following this idea of design clarity and atmospheric indeterminacy, the design plan of traditional Japanese architectures is simple, allowing beauty to be found in the atmosphere created by diffuse shadows.

In his work *In Praise of shadows*, Junichiro Tanizaki pays attention to this shaded and silent space that helps to meditate: “When we gaze into the darkness that gathers behind the crossbeam, around the flower vase, beneath the shelves, though we know perfectly well it is mere shadow, we are overcome with the feeling that in this small corner of the atmosphere there reigns complete and utter silence; that here in the darkness immutable tranquility holds sway. The *mysterious Orient* of which Westerners speak probably refers to the uncanny silence of these dark places.” (TANISAKI, 1977: 20).



The Buddhist philosophy is characterized by the idea of impermanence. The idea of a fluid movement is expressed by the words *shogyo mujo* and also assumes meaning for the world of architecture. *Mujo* literally means “no constancy”; it is not simply a movement of constant speed in one fixed direction, but a deviated and discontinuous movement (INOUE, 1985: 171).

The shadows are the characterizing and defining element of the Japanese space. At the same time, the shadows create an indefinite condition, constantly changing due to the movement of the sun, which gives more depth to the perceived space. For this reason, Tadao Ando says that in the darkness of the traditional tea ceremony room, a seated person, silent and contemplative, has the sensation of living unlimited dimensions thanks to the interaction between light and darkness (DAL CO, 1997: 458).

Although the eastern culture has been very influenced by western industrial and technological development, references to tradition are not lacking in modern architecture. The Indian Institute of Management Ahmedabad by Louis Kahn is an example.

Completed in 1974, the IIMA is located in the state of Gujarat, in India. Here, modern architecture mixes with tradition through the use of local materials (brick and concrete) and facade geometries linked to Indian vernacular architecture. The facade is designed as a filter for light and to promote natural ventilation. Furthermore, the porosity has allowed the creation of corridors, *portici* and new spaces for aggregation and dialogue. According to Kahn, not only the classroom but also the spaces around are places for the development of academic thought. These places are constantly redefined by the changing shadows play of the facades. There, in the darkness like in the traditional tea ceremony room, the atmosphere has infinite variations of space and perceived time (DAL CO, 1997: 458).

Looking at the project it seems to reread Louis Kahn when he exalts “the endlessly changing qualities of natural light in which a room is a different room every second of the day.” (KAHN, 2013 [1969]: 31)

As established by Sigfried Giedion in his book *Space, Time and Architecture*, the interrelationships between space and time form an essential paradigm for architecture. Here, the essence of space is due to the enormous potential and infinite spatial facets where a man can project himself physically and ideally (GIEDION, 2009: 435-436). Taking up Merleau-Ponty’s words “I am not in space and time, nor do I think space and time; rather, I am of space and time; my body fits itself to them and embraces them.” (MERLEAU-PONTY, 2013: 141). In this perspective, the shadow of traditional Japanese architecture allows man to live in a space-time *continuum*. Kakuzo Okakura says that “Definition is always limitation” (OKAKURA, 1997: 33). But when the shadow defines the space, it makes it deeper; controls time, but creates a *trance* state where time is amplified. Ultimately, in the shadows the *Silence* and the unmeasurable of architecture are fully manifested.

Fragment V. Inhabiting the dimness. Intimacy not Privacy.

“I enter a building, see a room, and – in the fraction of a second – have this feeling about it.” Peter Zumthor

Today’s society tends to think of space as divided between *public* and *private*, forgetting the personal and intimate relations between the architectural space and those who live it. Luis Barragán, the architect of mystery, shadow and intimacy, writes: “Take [...] the use of enormous plate windows [...] they deprive our buildings of intimacy, the effect of shadow and atmosphere. Architects all over the world have been mistaken in the proportions which they have assigned to large plate windows or spaces opening to the outside [...] We have lost our sense of intimate life, and have become forced to live public lives, essentially away from home.” (RAMIREZ UGARTE, 1962: 242).

According to Barragán, the window has lost its profound meaning as mediator between worlds, between interiority and externalities. Its value is reduced to the simple amount of light it brings. Losing its metaphysical meaning, the window then becomes a simple absence of the wall.

Thinking about space without its ontological value means precluding architecture’s ability to relate to those who live inside. The architectural space must be designed to be lived through sensory experience. In this regard, Merleau-Ponty writes that the task of architecture is “to make visible how the world touches us” (MERLEAU-PONTY, 1964: 19) transmitting man’s thoughts through “plastic emotions” (LE CORBUSIER, 1959: 7).

Edward T. Hall, in his book *The Hidden Dimension*, deals with the theme of the relation between the bodily senses and the collective and personal space (HALL, 1969). Hall’s studies demonstrate the important connection between the built space and the instinctual and unconscious aspects of man. Our body can react physically and emotionally according to architectural space. Heinrich Wölfflin describes these sensations in his work *Prolegomena to a Psychology of Architecture*: “powerful columns produce in us energetic stimulations, our respiration harmonises with the expansive of narrow nature of space. In the former case we are stimulated as if we ourselves were the supporting columns; in the later case we breathe as deeply and feeling as if our chest were as wide as the hall [...] the architectural impression [...] is essentially based on a directly bodily feeling.” (WÖLFFLIN, 1994: 149-190).

Because of this strong relation, Merleau-Ponty places, in his philosophy, the human body at the centre of the experiential world. As Richard Kearney summarizes, “it is through our bodies as living centres of intentionality [...] that we choose our world and that our world chooses us.” (KEARNEY, 1994: 74).

The self and the world interact and define each other through the senses. Merleau-Ponty writes: “My perception is [therefore] not a sum of visual, tactile and audible givens: I perceive in a total way with my whole being: I grasp a unique structure of the thing, a unique way of being, which speaks to all my senses at once.” (MERLEAU-PONTY, 1964: 48).

The perception of the body is also an instrument of knowledge, a bridge between man and the world that is modelled according to the changing points of observation (CATALANO, 2011:18). As Catalano says, paying attention to the perceptual sphere means broadening our understanding of reality. Creating a spatial environment taking into account sensitive experience means creating an extension of our corporeality understood as an inseparable unity between spirit and matter (CATALANO, 2011:18).

For this reason, Gabriel Marcel says “I am my body” (DREYFUS and DREYFUS, 1964: XII) and the poet Noël Arnaud adds: “I am the space where I am.” (BACHELARD, 1969: 137).

An important role, in the relation between space and body, is given by light and shadow.

In the 17th century Newton formalized the laws that describe the movement of light, how it works and how it spreads. From a physical point of view, light is described as a material also having an intangible side. Light is the only element capable of deceiving gravity and through its materiality introduces immateriality into the space (CAMPO BAEZA, 2009: 236).

The sculptor Eduardo Chillida bases his research and his works by making light a sculpture within the space. Light permeates space and expresses it. For the Spanish artist, the volumes that delimit architecture are a function of light and for this reason, light is a “constructive” element. Ultimately, the light is the materialization of the architecture and the darkness his dematerialization (AAVV, 2006: 34).

Tadao Ando is one of the architects who most use shadows to dematerialize the space. Ishihara house in Osaka (1977) and the Koshino house in Ashiya (1984) present the elements that allow perceptions of materiality already in sight, even before touch. The spaces defined by the alternation between light and shadow are in fact clear and understandable though not clear perceptual models within the *vague* Japanese atmosphere.

Matter emerges little by little to perception, almost shy of being noticed in its real hardness. Through the play of lights, Tadao Ando manages to excite with the definition of his spaces, his shadows tries to create a bridge with another dimension, the intimate and spiritual one: “My spaces are born not of intellectual operations, but of the emotions rooted in the desires of many different people... my spaces transcend theory and appeal to the deepest spiritual levels. In other words, my spaces relate to fundamental aspects of humanity.” (POWELL, 1984: 134).

Another representative project of Tadao Ando’s idea of space is the Chichu Art Museum realized in 2004 on the island of Naoshima in Japan. Also in this case, the interrelations between architecture and man are expressed between light and darkness, and lived in the sensorial experience (DAL CO, 1997: 458).

Most of the rooms of the art museum are built underground, where natural lighting is used to indirectly illuminate the works while artificial lighting is absent. In the Chichu Museum Art, it is, in fact, the movement of light and shadows to guide the path. At the entrance of the building, the visitor has the feeling of entering the depth of the earth and the darkness, step by step, acquires greater weight given the cuts for light.

In the exhibition halls, visitors are led through gradually more illuminated environments up to the large ethereal space of the *Water Lilies* of Monet. This room is an example of how the Chichu museum is a place that generates tactile and visual experiences. Here, James Turrell creates a *cut* of the sky to prefigure the difference between the two worlds, the earthly and the transcendental one. This opening is the plastic representation of the light that becomes architecture. Turrell defines this particularity as the *thingness of light*: “I basically make spaces that capture light and hold it for your physical sensing. [...] It is [...] a realization that the eyes touch, that the eyes feel. And when the eyes are open and you allow for this sensation, touch goes out of the eyes like feel.” (TURRELL, 2000: 1-2).

The environment preceding the entrance into Monet’s room, a dark room, prepares the visitor for the vision with a sense of strong compression that can be freed in the next space where Monet’s paintings are in the light. The uniform and soft natural lighting pour zenitally, evoking the search for light by the French author. As summed up by Ando: “Darkness rather than the light, below ground rather than above, the Chichu Art Museum is the most direct expression of this feeling rooted deep inside me. In the forty years since I decided to become an architect, I have been looking for my own *matrix of space*, which in my imagination is an obscure place like a cave surrounded by thick, heavy walls of earth, or a space in the darkness lit only with a dim ray of light.” (ANDO, 2005: 88).

This concept is perfectly expressed by Ando in the Church of the Light realized in 1989, in Osaka. The radical project is composed of the simple plan that characterizes the traditional Japanese architecture and a cut in the shape of a cross in the main facade. Entering we have a particular experience: the eyes slowly adapt to the different light conditions enhancing the sensory perception of place. The ray of light penetrates the building changing at any moment the shadows in the interior space and the intensity of the darkness.

When the light penetrates inside a place it seems that it lifts the mass and pushes it upwards, removing its weight. Conversely, when space is bathed in shadow it seems that architecture is gaining weight and is attracted to the earth. Campo Baeza explains the light-gravity relationship in his book *Idea, Light and Gravity* in the following way: “[...] light is the only one that is truly capable of winning, of convincing gravity. And so, when the architect appropriately traps light, light perforates the space formed of structures which, however heavy they are, need to hold onto the ground to convey the primitive force of gravity, break the spell and make that space float, levitate, fly. Santa Sofia, the Pantheon and Ronchamp all offer tangible proof of this extraordinary reality.” (CAMPO BAEZA, 2009: 320).

A recent architecture where light and darkness are studied in relation to gravity and the body is the Teshima Art Museum designed by Ryue Nishizawa, realized in 2010. This empty, windowless concrete architecture would seem to be the antithesis of the absence of gravity. However, thanks to the conscious use of the light, Nishizawa manages to create a vast and weightless interior space.

The project is summed up in a large reinforced concrete surface that generates a covered place. Even if with different shapes, the approach seems to resume that of traditional Japanese architecture where temples and houses are defined by the shadow of a large roof. The concrete surface completely illuminated by the sun seems to lose

gravity and assume an incredible lightness. At the same time, the shades generated by the two openings give weight to the flooring matter. The internal surface of the museum, plastic and elegant, seems to levitate and the atmosphere is suspended thanks to the mix of shades.

The space is vast and of public function, but at the lack of privacy is perceived a delicate feeling of intimacy linked to the enveloping of the roof and the deep shadows.

Beatriz Colomina explains how physical space, even in its immateriality, determines the state of comfort and intimacy of man. For example, the raised sitting area of the Moller house by Loos occupies a volume that protrudes from the street facade, just above the main entrance, on which there is a large window. The ability to see externally, while screened by the curtain, and internally, while screened by the backlighting, creates a state of control. And it is this state of control, generated by the architectural composition, which according to Colomina, allows the perception of intimacy (COLOMINA, 1990: 5-15). The shadow creates the same condition of intimacy: in the shadow, it's possible to see without being seen.

The shade also offers a feeling of cold to the touch, regardless of whether the temperature is low. On the contrary, light increases the temperature; even simply observing its presence offers an idea of warmth, in particular if opposed to the more accentuated shadows. The ability of the shadow to enhance the materiality of the space and to define it is therefore also accentuated by the body's perception of lower temperature. The shadow which in itself appears to be immaterial, manifests materiality. This is because darkness makes depth and distance ambiguous while, at the same time, suggesting tactile fantasy (PALLASMAA, 2005: 46).

The tactile experience that arises from the shadows allows memory to connect in a stronger way space and sensations, physicality and immateriality. Pallasmaa states: "The shadow gives shape and life to the object in light. It also provides the realm from which fantasies and dreams arise. [...] In great architectural spaces, there is a constant, deep breathing of shadow and light; shadow inhales and illumination exhales light." (PALLASMAA, 2005: 47).

The Therme Vals by Peter Zumthor built in Switzerland in 1996 is a perfect example of applying the suggestion of Pallasmaa. This work is a plastic representation of feelings and moods that let the observer to interpret the formal and spiritual message. In the therme, light and shadow seem to merge with the steam from the pools, creating a state of familiarity that is rarely possible in a public place. In this regard, Zumthor states: "My dedication to finding the right size of things is motivated by the desire to create degrees of intimacy, of closeness and distance. I love placing materials, surfaces, and edges, shiny and mat, in the light of the sun, and generating deep solids and gradations of shading and darkness for the magic of light falling on things. Until everything is right." (ZUMTHOR, 1999: 87).

Another work of Zumthor thought to create an intense sensitive experience is the Bruder Klaus Field Chapel completed in 2007, in Mechernich, Germany. The interior of the chapel was made by burning tree trunks that served as a formwork for the concrete walls. After removing the wood, many holes were also left on the walls to recreate the feeling of a night sky. What remains is an intense darkness that emphasizes, like a Rembrandt

painting, the light representation of divinity. This dark atmosphere leads to calm and silence to connect man with his spiritual world.

The Art Pavilion by Álvaro Siza and Carlos Castanheira in South Korea is no other architecture studied in order to create degrees of shadows and intimacy. Realized in 2018 in Saya Park, the Pavilion works like a sculpture on the hilly terrain. Entering the Art Pavilion, men have the perception of being absorbed by space, by the dense gradations of shading and darkness, and to be related with himself. As summarized by Castanheira: "Having come to the end of the route, we are presented with an external view of infinity. Inside the space, we look for our own internal, personal infinity." (CASTANHEIRA, 2020).

In this context of strong emotional and sensorial experience, according to the Portuguese architect, it is the dimness to express the essence of architecture: "The shadow reveals the beauty." (CASTANHEIRA, 2020).

The *Architecture of shadows* recreates an atmosphere of intimacy capable not only of expressing the immateriality of architecture but also of getting man in relation with himself. The degrees of shadows in the darkness creates a new and profound space where the eye is lost to give life to a deeper sensory perception. The obscurity is capable of reconstructing a dialogue with the inner world to which the human being belongs.

Synthesis

"A mere thing is, to take an example, this block of granite. It is hard, heavy, extended, massive, unformed, rough, colored, partly dull, partly shiny. We can notice all these features in the stone. [...] Obviously the thing is not merely a collection of characteristics, and neither is it the aggregate of those properties through which the collection arises. The thing, as everyone thinks he knows, is that around which the properties have gathered. One speaks, then, of the core of the thing." Martin Heidegger

The term synthesis (from the Latin *synthēsis*, derived from the Greek: *σύνθεσις* "composition") means "the composition of parts or elements so as to form and define a new whole"¹¹. From the composition of the fragments that make up the thesis, it's possible to deduce the ability of the shadow to put man in relation to the architectural space and with the self.

Nowadays, much attention is paid to the image of architecture and few to its essence. But in a world of too many things and too much noise, the real revolution is the *Silence* with which Kahn calls the immateriality of architecture.

If it does not exist from the physical point of view, the shadow exists as an element of visual and tactile perception, dedicated to the spatial and temporal definition. It is the intangible architectural element capable of restoring the plasticity and intimacy of traditional architecture to contemporary space. By this, the shadow contributes to creating what Zumthor calls *The magic of the real*: "the alchemy of transforming real substances into human sensations, of creating that special moment when matter, the



substance and form of architectural space, can truly be emotionally appropriated or assimilated.” (ZUMTHOR, 2006: 85).

This happens because the human being is attracted to what he does not see or completely understand. As Tacitus writes: “Omne ignotum pro magnifico” (Tacito Publico Cornelio, 98 d.C.: 30). It means: all that is unknown is *sublime*. The darkness is sublime in the eyes of the man who, inspired by the unknown, dreams and connects to the spiritual and inner world.

Da Vinci describes this sensation in the *Codice Arundel*: “Tirato dalla mia bramosa voglia, [...] pervenni all’entrata d’una gran caverna; dinanzi alla quale, restato alquanto stupefatto e ignorante di tal cosa, [...] per la grande oscurità che là entro era. E stato alquanto, subito salse in me due cose, paura e desiderio: paura per la minacciante e scura spilonca, desiderio per vedere se là entro fusse alcuna miracolosa cosa.” (Da Vinci *Codice Arundel*, f. 155r, 1478 ca).

According to Turrell, light is not the only precondition for seeing: darkness is another. Light is a precondition to be able to see everything, instead, darkness is the precondition to see something by focusing (TURREL, 2000: 2).

When space is very bright, the pupil contracts. “Obviously we are not made for that light, we are made for twilight. Now what that means is that it is not until very low levels of light that our pupil dilates. When it does dilate, we actually begin to feel light, almost like touch.” (TURREL, 2000: 2).

As the pearl must be observed in the dark to experience all its beauty, so architecture.

Man needs darkness to reconnect to the divine. In this regard, Sigfried Giedion explains that in the great archaic civilizations the image of the god is relegated to a dark cell. (GIEDION, 1969: 184).

By this consideration, the Pantheon in Rome acquires a new meaning. The zenithal opening of the *cupola* alone constantly introduces a vital flow of light into the closed space, generating a sense of infinite depth; however, the rest of the temple remains completely in the dark. The altar has no natural source of illumination and the space of the divine is so wrapped in darkness. This condition is constant during the day because the zenithal opening never gets direct light to the altar which is on the south side of the Church. God is in the *penumbra*: if in the Pantheon the concentration of the visitor is enraptured by the light, the faithful, turned to the altar, lives the prayer in the intimacy of the shadow.

There is much more in what man can’t see than in what he can see.

Tanizaki suggests turning off the lights. Then we will see (TANIZAKI, 1977: 42).

*Abbiamo bisogno di contadini,
di poeti, gente che sa fare il pane,
che ama gli alberi e riconosce il vento.
Più che l’anno della crescita,*

ci vorrebbe l'anno dell'attenzione.

*Attenzione a chi cade, al sole che nasce
e che muore, ai ragazzi che crescono,
attenzione anche a un semplice lampione,
a un muro scrostato.*

*Oggi essere rivoluzionari significa togliere
più che aggiungere, rallentare più che accelerare,
significa dare valore al silenzio, al buio, alla luce,
alla fragilità, alla dolcezza.*

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¹ Martins Edgar, *Where Light Casts no Shadow*, 2008. Consumed by an increasing compulsion for clarity. (film buried for 6 months in soil with pH + 8.5) "In this series I was interested in developing a visual vocabulary that resulted from the failure/corruption of the photographic process, whilst challenging Photography's inextricable dependence on light. [...] The result is images that look like very precise drawings or grids from afar, but which, at close up, reveal all the incongruities inherent to the process and the passing of time – the skewed lines that result from drawing the images in near darkness, the corruption of the film by the weather, and being buried in total darkness." online consultation: www.edgarmartins.com (February 22th, 2020).

² "The West too has known a time when there was no electricity, gas, or petroleum, yet so far as I know the West has never been disposed to delight in shadows." Tanizaki Jun'ichirō, *In Praise of Shadows*, Edit. and Trans. T. J. Harper and E. G. Seidensticker, Leete's Island Books, New Haven, 1977, p. 30.



³ See “American Indian”, *Encyclopedia Britannica*, online consultation: www.britannica.com (March 4th, 2020).

⁴ See “Trullo”, *Enciclopedia Treccani*, online consultation: www.treccani.it (March 5th, 2020).

⁵ “The hands want to see, the eyes want to caress.” As quoted in *Not Architecture But Evidence That It Exists - Laretta Vinciarelli: Watercolors*, Brooke Hodge, Harvard, 1998, p. 130.

⁶ The Myth is at the beginning of the seventh book of *Republic* (514a - 520d). Plato makes an allegory to explain that the psyche must be freed from the slavery of the visible / sensitive world to travel in the difficult, but true, intelligible world. Here, the light is a metaphor for truth and the darkness for ignorance.

⁷ see “Trompe l’oeil”, (French: deceive the eye) “A painting that is cleverly designed to trick people into thinking that the objects represented in it are really there.” *Cambridge Dictionary*, online consultation: dictionary.cambridge.org (May 27th, 2020)

⁸ The swiss architect is inspired by René Descartes, better known with the Latinized name: Renatus Cartesius. The philosopher wrote: “Cogito, ergo sum”. In English: “I think, therefore I am”. Le Corbusier, *Precisions*, MIT press, Cambridge MA, 1991, p. 7.

⁹ “Yang” and “Yin” in Chinese philosophy, the male and female principle of the universe. Yang is represented as light and positive. Yin is represented as dark and negative. *Cambridge Dictionary*, online consultation: www.dictionary.cambridge.org (April 28th, 2020).

¹⁰ “La cancellatura è come lo zero in matematica, chiamato a formare, da solo, tutti i numeri e tutti i valori”, Free translation, online consultation: www.emilioisgro.info (April 24th, 2020).

¹¹ See “Synthesis”, *Merriam Webster’s Collegiate Dictionary*, online consultation: www.merriam-webster.com (May 9th, 2020)