

**IDEA, LIGHT AND GRAVITY, WELL TEMPERED**

**On the foundations of architecture**

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## IDEA, LIGHT AND GRAVITY, WELL TEMPERED

On the foundations of architecture

When the Russian architect Konstantin Melnikov decided to build his own house, that fascinating white cylinder in Moscow, he wrote these emphatic words:

Having become my own boss, I begged her (Architecture) to take off her marble dress at once, to wash the make-up off her face, and to show herself as herself, NUDGED like a young and graceful goddess. And as befits a true beauty, she would give up being pleasant and complacent.

Konstantin Melnikov. Na Shchet doma. 1953. Melnikov Archives

For that is the Beauty that one would want for one's Architecture. A naked, intelligent, ESSENTIAL Beauty, capable of captivating us through the head and the heart.

Through the head, with the overwhelming logic of reason; with the precision of the dimensions, with the efficiency of the proportions, with the clarity of the scale. With a constructed idea.

Through the heart, with the warm feeling of emotion. With the splendour of light. With the serenity of the spatial order that gives the control of gravity.

IDEA, LIGHT and GRAVITY are the three main components of that Architecture that I have called ESSENTIAL. That Architecture that proclaims MORE WITH LESS. As a reflection on Mies Van der Rohe's "less is more". A more that wants to have man, with the complexity of his Culture, as the centre of the created world, as the centre of Architecture. A less that, above all minimalism, what it intends is to go to the heart of the matter, with the "only precise number of elements" capable of materially translating these ideas.

IDEA, LIGHT AND GRAVITY. Nothing more and nothing less.

### IDEA

The Idea is the synthesis of all the elements that make up Architecture (Context, Function, Construction, Composition). As if it were an operation of alchemy, in a distillation of multiple elements to achieve a unique and unitary result: an Idea, capable of being built, of materialising.

And just as forms pass away and are destroyed, Ideas remain, they are indestructible. The History of Architecture is a History of Ideas, of constructed ideas, of forms that materialise and set up these Ideas. For without Ideas, forms are empty. Without Ideas, Architecture is VOID. It would be pure empty form.

I claim the Idea as the necessary basis for any work of creation. As an essential basis for Architecture. To think or not to think. This is the question.

## LIGHT

Light is an essential component, indispensable for the construction of Architecture. Light is MATERIAL and MATERIAL. Like stone. Quantifiable and qualifiable. Controllable and capable of being measured.

Without Light there is NO Architecture. We would only have dead constructions. Light is the only one capable of tensing the space for man. To put man in relation with that space created for him. It tightens it, it makes it visible.

The Light that gives reason for TIME, the LIGHT CONSTRUCTS TIME.

## GRAVITY

Gravity, which fortunately we cannot escape from. That G that we studied as children in the formulas of Physics. Without Gravity, Architecture, whose History is a struggle to direct it, to dominate it, to overcome it, would disappear. It would atomise. Without Gravity there is no possible Architecture, because its necessary materiality would disappear.

GRAVITY BUILDS SPACE. The heavy material ELEMENTS, which make the forms that make up space real, must end up transmitting Gravity, the weight of their materiality, to the earth. The gravitational support system, the structure, is what orders space, what builds it.

And so I call essential space that which is made up of only the indispensable number of elements capable of accurately translating an idea.

This Architecture, whose materiality is a CONSTRUCTED IDEA, whose TIME is constructed by LIGHT, and whose SPACE is constructed by GRAVITY, is the Architecture that I call ESSENTIAL.

And to further clarify this proposal, to further unveil it, I will point out three reflections: How Light is capable of defeating Gravity. How the passage of Time strips Architecture of the superficial so that only the Essential remains. How Architecture admits a certain degree of imperfection in its materiality: a praise of imperfection.

## LIGHT AND GRAVITY (How Light Defeats Gravity)

Light, material but always in movement, is precisely the only one capable of making the spaces formed by the shapes built with gravid material float, levitate. It makes gravity fly, disappear. It defeats it. The unbearable heaviness of inevitable and indispensable matter can only be overcome by Light.

The imposing mass of the Pantheon, whose ideal spherical shape makes clear the overwhelming power of this space, rises in ineffable movement as if it were levitation under the spell of the sun that pierces the magnificent oculus. Light overcoming Gravity summons sublime Beauty.

And it is curious, or not so curious, that the two technological inventions that have made the revolution in Architecture possible are directly related to Light and Gravity: flat glass in large dimensions and steel alone or reinforcing concrete.

Flat glass makes possible that Copernican turn of vertical light falling on the horizontal plane above the head of man. It makes the transparency of the upper horizontal plane possible.

Steel, alone or in reinforced concrete, makes possible that other Copernican twist of being able to separate the enclosure from the supporting structure. The skin of the bones. Those bones, those pillars, through which that inescapable Gravity will now run to meet the earth.

#### THE CLARIFYING PASSAGE OF TIME

Time, built by Light, slowly and patiently makes the superficial elements that so often adorn the flirtatious Architecture disappear. Time, like a doctor seeking to bring it back to life, strips it to its bare essentials. Architecture is left with only its essential attributes. Dimension, proportion and scale give life to the material that carries within it the invisible tension of Gravity. And all of this is touched by the Light that, as the builder of Time, produces the visible tension that makes man mute. This sometimes appears paradigmatically in the ruin which, stripped of all superfluous ornamentation, rises radiantly before us with the splendour of naked Beauty.

When Heidegger, in precise terms, speaks of the "solid outpouring of the temple that makes visible the invisible space of the air", he brings before us the "ruin" of the Parthenon in all its splendour as Essential Architecture, which seems to hear his words: "the temple, in its subsisting, makes things present and men aware of their presence".

#### PRAISE FOR IMPERFECTION

Before my first visit to Finland, my admiration for Alvar Aalto was enormous. Even as a student I was attracted by the fluidity of his floor plans, the richness of his sections, the incredible light of his spaces set up in always dazzling images. And in that admiration Aalto, and all Finns with him, was assumed to have a degree of perfection unattainable for the rest of us mortals. And here, now, I discover in the master's works more than one imperfection that is familiar to me: damp, cracks, badly preserved elements. Seeing the "human" side of Aalto's works, far from diluting that admiration, leads me to increase it. For this "imperfection" in the finish of some details, accentuates even more the "perfection" of Alvar Aalto's ideas, the essence of Alvar Aalto's Architecture, the essence of his Architecture.

Architecture, over and above details and design, its perfection or imperfection, RADICATES on its most essential components. Details and designs will only be valid when they serve to underline those central issues.

Nowadays we are inundated, and the publications collaborate in this, with a multitude of repugnant architectures, architectures?

When Alvar Aalto wants to, and can, and knows how to make an adequate display of design and perfection, he does it. Villa Mairea, which I will never forget, is proof of that. When Aalto, at other times, goes only and mainly to the heart of the matter he does not mind being "imperfect", gloriously imperfect.

Of course, the master was well aware that these three points of support, IDEA, LIGHT AND GRAVITY, were like the three legs of the table of Architecture.

And so, with these three registers of IDEA, LIGHT AND GRAVITY, I will now present three works that are, or want to be, three constructed ideas: a small house, a public school and the central offices of a bank. Or better still: a "hortus conclusus", an architecture "facing the sea" and an "impluvium of light".

### HORTUS CONCLUSUS

A secluded villa in the Andalusian countryside. With the client's desire for absolute privacy. A space poured inwards, enclosed within four walls. Four walls that make up this "closed orchard" of the suggestive biblical image. Inside, a space in freedom: a proposal for a continuous space. Courtyard, room, courtyard. Composed with a clear double axiality. Constructed with gravity-bearing walls that are excavated, broken in the precise places for the flow of Light and Space.

A space that is horizontal, crossed by horizontal light with an east-west orientation. Four lunar lemon trees as a counterpoint referencing the four corners. And at the end, the water, which seems to come from within to fill the hollow excavated in the stone.

### LOOKING OUT TO SEA

The Atlantic Ocean in front, to the west, rises up as an impressive reference to which the building, a school, opens its eyes. The eyes, large openings through which the more public interior spaces look out to the sea, making it their own. The total volume follows the fabric of the existing city. The irregular shape of the site is arranged with the simple mechanism of a square courtyard with palm trees. The main hall, where all the circulations converge, is resolved as a large vertical space of triple height, pierced by the diagonal light coming from above. Throughout the day, the sunlight streams through this space, which opens up to the sea through one of these eyes. The other eye, a hollow of a double order, which thus manifests its public character to the city, appears as if excavated, revealing its gravid construction. The building, like a sphinx, looks eternally out to sea.

### LIGHT IMPLUVIUM

The idea is to make a Bank using the most luxurious material ever dreamed of, sunlight, which we are going to get, of course, free of charge. A Bank, the seat of wealth, built with

the cheapest material within everyone's reach. How could anyone resist such an enchantment?

The undefined location on the outskirts of Granada required a building capable of creating a strong reference element in this dispersed territory. First of all, a base was created that responds with a single gesture to the level of the ground plane and will be a container for various uses. A "stereotomic" box with reinforced concrete walls of cubic proportions rises resolutely on this podium. This box, formed by a 3 x 3 x 3 metre grid of thick concrete panels, becomes a trap for light. Inside, to reduce the large structural dimensions, four impressive columns appear.

The diagonal orientation of the box means that two facades face south and two face north. The south facades function as a "brisoleil" and are glazed to the full extent of the interior beams. The northern facades are designed as a plentery of horizontal stone-glass-stone strips, flush with the exterior beams. Skylights open on the roof over each of the four columns, according to the diagonal order of the light. In this way, the direct sunlight is soothed on the south façades by the shade. That the homogeneous light from the north enters through the two flush façades. That the solid light which will enter through the skylights, and which will materialise its movement at its intersection with the columns, fills this interior with light, this "impluvium of light".

Inside, a second "tectonic" box, made of steel, glass and alabaster, will contain the functions which are organised according to a simple ring scheme with four vertical communication cores at the corners. Individual offices receiving light from the north facades, and general offices - open double-depth offices receiving light from the south facades. As these open-plan offices need more light because of their larger size, a large alabaster wall is articulated over the corridors of the individual offices. This white "inner façade" transforms the solid light received from above into reflected light, projecting it accurately onto the open-plan offices.

In short, it is a large diagonal space crossed by a diagonal light.

And to conclude the rigorous exercise of Light that this project aims to be, I will make three references:

1.- The fascinating image of Sir Owen Williams' Daily Mirror in London under construction. Not yet closed, the Light establishes a prodigious relationship with this impressive structure. This image has been on my desk for a long time. Also the long time of work on this Granada project.

The painting "The Interior Navigator" by Guillermo Pérez Villalta, one of the best contemporary Spanish painters. It was the painting that represented Granada at the Universal Exhibition in Seville. It was conceived and painted in Granada. I discovered it after doing the project. You can imagine my astonishment. The relationship, besides being mysterious, is an incredible coincidence.

3.- The Cathedral of Granada, which I encouraged the directors of the Bank to visit so that they could see something similar to what we are going to build. Once the plans of the Cathedral with the exact measurements were requested, astonishing coincidences appeared once again. This time profoundly architectural: the same height, the same section of the columns and identical distance between them. The same material, as the golden concrete would be very similar to that stone. And, of course, the same light.

The Cathedral of Granada is one of the most beautiful spaces built in Spain. Perhaps the most beautiful Renaissance cathedral in Andalusia. The one of the "snowy whiteness", as the poet described it.

And if the dimensions and the proportions and the materials, and the light, are the same, it is to be hoped that the Bank building in Granada, once erected, will be able to attain that longed-for beauty.