

THE AIR IS CALM AND CLOTHED IN BEAUTY AND UNACCUSTOMED LIGHT

About Precision in the Use of Light in Architecture

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In this essay we try to establish a connection between the musical instrument and architectural space. The musical instrument, pierced by air, produces the gift of music. Architectural space, pierced by light, produces that unspeakable thing called architecture. In both cases, air and light should be measured with absolute precision.

“The air is calm and clothed in beauty and unaccustomed light, Salinas, when that consummate music sounds, guided by your wise hands” [El aire se serena y viste de hermosura y luz no usada, Salinas, cuando suena la música estremada, por vuestra sabia mano gobernada]. So begins the Ode III to Francisco Salinas, where Fray Luis de León speaks about light and music in such beautiful words.

And the truth is that architectural space is similar to a musical instrument. Both in wind and string instruments the secret is in the AIR. Air passes through the wind instrument and vibrates inside the string instrument. Air breathed into a flute as well as air vibrating over the tensed strings of a cello generates something as sublime as music. Without air there would be no music.

And in a similar manner, light, natural light, sunlight, by crossing a well-tensed space as conceived by the architect, through carefully arranged fenestration, generates that incomparable emotion that only architecture can arouse. Without light, architecture would not be possible.

In the same way that a musical instrument must be well conceived, well built and well-tuned for music to sound correctly, so too should architectural space be well conceived, well developed and well built for architecture to resonate.

IDEA, CONCEPTION.

The musical instrument and architectural space should be correctly conceived. It is necessary to have a clear idea of what one wants to achieve. And then to know how to do it, to control with precision the shapes, dimensions and proportions that will bring about the desired result.

If one wants to listen to violin music, one should build the instrument with the shape, size and proportion of a violin. A violin is not the same as a viola.

Today I was listening to a radio broadcast about a Museum exhibiting musical instruments. And it seemed strange, unnatural even, that musical instruments, whose *raison d'être* is music, were exhibited like corpses, dead bodies. Musical instruments are meant to resonate, to make music, when air passes through them and the miracle takes place.

If an architect wants to create a space tensed by light (can there be a space with no light?), he must conceive it with the precise form and proportions so that the building

wakes up every morning, and, according to the rhythm of light and time, lives throughout the day, throughout TIME. The idea of a new project must contain from its conception that inescapable relationship with light. I will never tire of insisting that a clear IDEA of a project is the essential foundation for architecture to appear. And LIGHT should be at the centre of that IDEA.

This is the first phase, when the OUTLINES of the architectural project are decided. It is the time of knowing what and how the architecture will be built.

DEVELOPMENT. FINE-TUNING.

If even the most perfectly built musical instrument needs tuning, the same thing is true for architecture. And this architectural fine-tuning is not only the very thorough attention some architects dedicate to detailing. Fine-tuning in this case refers to the precision in the relationship between space and light.

María Zambrano defined poetry as “the word in harmony with the number”. And along similar lines, Osip Mandelstam suggested that “in poetry all is measurement”. This precision, which is a sine qua non for poetry, plays the same role in music and architecture.

Precision is essential in all artistic creation. Art, artistic creation, is commonly confused with whimsy, fanciful, or capricious form. On the contrary, artistic creation demands an enormous precision and refinement, which in turn require wisdom and time from the creative artist.

If a musical instrument is to produce that consummate music described by Fray Luis de León, it must be finely tuned. In string instruments, the strings must be tensed with absolute precision so that they can vibrate in the desired range. And in wind instruments, the diameters of the tubes and the holes must be exactly defined.

If architecture is to resonate like divine music when touched by light, it must be perfectly tuned. It needs the placement, shape and dimension of the openings relating to the exterior, to the light, to be perfectly defined by the architect. Doors, windows and skylights should be understood as openings in an architectural space, connecting it to the light, the views and the air. Everything must be precisely defined in this second stage, the FINAL PROJECT DESIGN. This stage is not a simple mechanical development of the preliminary design. It corresponds to a real fine-tuning of the instrument.

CONSTRUCTION

Once the musical instrument is built and tuned, it must be very well played, so that the resulting music sounds very good. An accomplished musician with a good, finely tuned instrument will be able to create the precise notes, to make the air vibrate in a way that that will touch our deepest emotions.

In architecture, following on from the IDEA, which is a mental construction, and its subsequent detailed development into what architects call the PROJECT DESIGN, the interpretation of the piece is precisely its MATERIAL CONSTRUCTION, its implementation. The construction is a true interpretation of the initial ideas and not merely the mechanical application of the construction drawings. Through close and attentive supervision of the construction works the architect continues to fine tune the architectural structure even further.

I have often quoted Saramago as saying that we that architects have little brains in our finger-tips, which is another way of saying that we think with our hands. And I recently read that a great composer from Seville in the 17th century, Francisco Guerrero, used to praise Pedraza, the wonderful organ player from the Cathedral, by stating: “in each of his fingers I see an angel”. And so it is. The architect is someone who builds ideas and thinks with his hands.

In the case of music, it is easy to distinguish between building, tuning and playing an instrument.

In the case of architecture, the physical, material construction is what we consider to be the interpretation of the initial idea.

And then LIGHT, like the air in music, will pierce the space created by the architect so that it sounds well. And, as if by a miracle, when light arrives, it produces that power of touching time, something that appears elusive but is nevertheless within our reach, and deeply moves us. Time suspended, say the poets. That light is the builder of time is hardly an appropriate sentence for an educational text. This spatial miracle is a tangible reality within our reach.

In my Caja Granada building, where I clearly and emphatically create a dialogue between the large central space and the LIGHT of the sun. I have never seen two performances alike –each day and each hour it sounds differently, and always well. And it always manages to deeply move us, including me.

The directors of my Nursery for Benetton in Venice have published a little book I found very exciting, since it was full of images showing that they had clearly understood my intentions for that building. In one of the images, a little girl is touching the imprint of the sunlight on the wall, while exclaiming “Il sole! Ho toccato il sole!”

And now, on my table, I mean on my computer, still vibrating, the breathtaking design that a young Portuguese architect, Paulo H. Durão, and I are developing for Gallarate Airport in Milan, where we are planning a box filled with radiant light, as if it were a cloud pierced by sunlight. I hope to show you the built work.

FINALE

Ultimately, when proposing this comparison between musical instruments and architectural spaces, I want to insist once more that the works of architecture that really matter are not born from fashionable fads or whims or from facile formalism to impress the ignorant. On the contrary, architecture demands clarity in the ideas it generates, precision in its development and adequacy in its construction. And always an understanding of light as its main component.

We are all familiar with how Paul Valery, in his *Eupalinos*, classifies works of architecture as mute buildings, buildings that speak and buildings that even sing. Well, to make them sing, we must conceive them well, tune them well, and build them well. And thus architecture will sing the finest music and will be able to bring light and happiness to mankind.

Music is AIR. And Architecture is also AIR tempered by LIGHT. Without AIR there is no MUSIC. Without LIGHT that makes the AIR vibrate there is no ARCHITECTURE.