

ARCHITECTURE AS ARTIFACT

On the relationship between architecture and nature

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In this essay, I would like to meditate on how we might understand architecture as an artificial product, an artifact, a work of art made –arte/facto– with and from reason.

In particular, I would like to show how architecture arises in nature and remains within it as something yet foreign to it, as artifice or artifact. I would like to show that architecture is at its best when dialoguing with nature and accentuating its value, while still never imitating it or blending in with it like a chameleon.

Though architecture learns from nature, converses with nature, and even takes inspiration from nature, it should never attempt to imitate nature itself.

On the other hand, architecture is undeniably constructed with materials that come from nature, and in previous epochs, materials crudely appropriated from the natural environment, like stone or wood. The later arrival of bricks or iron heralded a first elaboration of nature's raw materials. In our own time, large sheet glass or the most technologically ingenious variations of steel are made with elements derived from nature; the basic building blocks of architecture have not changed whether they come from the fusion of sands from the seashore or from the transformation of minerals from the mountains, and no matter how sophisticated the processes needed to manufacture them.

This indissoluble relationship between architecture and nature—whether in its collocation within it or in its metamorphosis of it—can never lead us to suppose that our creative work is anything but artificial.

Osip Mandelstam once observed:

Architecture is not part of nature, not even nature at its best and most exquisite. Much less is it her reflection, moreover, which would constitute a mockery of the law of identity. With chilling freedom, architecture situates itself in a field of action interpreting nature.

I must admit that where Mandelstam wrote “poetry,” I’ve taken the liberty of substituting “architecture,” since Mandelstam’s words seem to be addressed to many of the architects who go throughout the world attempting just the opposite, for example those who can’t discuss nature in architecture unless it involves sustainability or planting vegetables on buildings. Such architects are like owners of the organic restaurants that have popped up all over New York: everything that’s not organic, they say, kills.

Architecture has been, is now, and always will be artificial. It is an artifact, that is—looking at the Latin root arte (by means of artifice) factus (a thing made) —a product of human ingenuity and technique. In this sense, “artificial” and “artifact” are more than fitting words for framing what architecture is about: making something that is the product of reason, a derivative of man’s thought. This is something very different from what nature offers us itself, even at a superficial level. Though we may converse with it and deeply love it, all

self-respecting architecture –from Palladio’s Villa Rotonda to Le Corbusier’s Ville Savoye–stands in a perfect relation to Nature as artifact not imitation. But if that is not sufficient, we will include the treatise *De rerum natura* by Titus Lucretius Carus in the next bibliography for these architects, and we’ll put a photo of the Roman Pantheon on the same table.

Nature has its own eternal and inescapable laws, dating from the creation of man, from Adam and Eve. God put them in Paradise, and after eating of the apple, they constructed the first architecture: the clothing they made from oak leaves with which they covered their pudenda. The canvasses painted by Dürer, housed at the Prado Museum, are a marvelous reflection of this post-lapsarian situation. Sometimes I tell my students a made-up, but plausible story about Adam and Eve’s leaves and branches: they were taken from the same oak tree the Abbé Laugier used to build his primitive hut centuries later. According to Laugier’s well-known engraving, the folded branches of the oak tree comprise the most primitive constructed architecture.

But obviously the primitive hut had been constructed much earlier. One can even suppose that Adam himself, sick and tired of the cave, which from the beginning served to shelter him and with a certain nomadic notion of liberty, would have been the first to construct the primitive hut and so be the first one to choose where to live after weighing up the alternatives. This wholly architectural operation of choosing a place is no more than a reflection of the highest human quality: freedom.

From the beginning, man has imposed a certain order on nature. When we drive past vast stretches of planted olive trees, plotted in lines with an implacable geometry that clings well to the topography, what we are contemplating is nature ordered by man. This order is the same order that the architect establishes when he rationally draws up city plans, from the layout of Roman towns, to Manhattan’s efficient grid.

In no case could one consider this to be a destruction of nature, on the contrary, it is a matter of establishing an appropriate, logical relationship –one that is led by reason.

And Man –the architect at heart– will rationally choose the appropriate materials to construct the most essential structures, and those materials, logically, will come from nature. They will be nature herself, manipulated and transformed. Of course the materials we use today also come from nature, in this case, often much more transformed than merely manipulated.

The most advanced concrete and the most sophisticated steel both come from nature. Artifice –technology– thanks to man’s reason, does nothing more than transform nature. Glass, that material that offers absolute transparence and allows the sun’s rays to pass through it miraculously, without touching or staining it, comes from the silica of the seashores and deserts, the same sand that caresses our bare feet on the beach. Glass, steel, and cement –the three most modern materials that have made contemporary architecture possible– come, of course, from nature.

NATURE

Nowadays there is a vain tendency among architects to equate architecture and nature, disguising both themselves and their architecture with plants. At times they place vertical gardens on the outer walls of their buildings; other times they cover the rooftops with plants, calling it a “roof garden,” as if there weren’t enough earth in the world to plant gardens; yet others cover the building entirely in plants. They cover rooftops, walls, whatever it may be, even themselves, as if camouflaging in preparation for a non-existent war. All of it is “contra natura”: difficult, expensive, and grossly problematic to maintain. It is, however, demagogically popular.

If you leaf through architecture magazines from the past few years, you’ll see they are full of examples of this type of “sustainable architecture”. I maintain that it is sustainable at an enormous economic expense.

In stark contrast to forcing nature with the pretension of calling it architecture is to converse with it –something that architecture has always done, and something that good architecture has always done very well.

Villa Rotonda, from the choice of a topographically suitable place to the last material and formal detail, is a hymn to architecture in its relationship with nature: presiding over it, giving it context, conversing with it.

The Farnsworth House by Mies van der Rohe is also, above all, a hymn to nature. The spatial transparency and continuity achieved there were conceived of precisely because the site sits within a marvelous natural forest that, in turn, becomes the protagonist of the artificial operation. The equidistant columns, in particular, establish the order of the space, providing scale and rhythm. One could say that these columns are the abstract reflection, filtered and rationalized by the architect, of the trees found in the nearby forest. The platform too, raised up to eye level as if it were a raft, lets nature pass beneath it; the absolute transparency of its large plate-glass perfects the operation. In short, it would never have occurred to Mies that making a rooftop garden would make the house “blend in better” with the nature surrounding it.

Luis Barragán builds Gilardi House, a wonder of color and calm, around a jacaranda whose purple flowers provide the right counterpoint to the pink, red, and, blue color of its walls. The result is sublime, bringing out nature in the most subtle and logical way; integrated to such a degree that it is hard for us to separate the image of the house from that of the tree.

When Le Corbusier, in a naturalistic fever, carries a tree up to the roof and has a photo taken that he could never bring himself to destroy, he’s doing nothing more than entertaining his naturalistic temptation. Upon seeing the result, he immediately eliminated the tree from the roof. It was far too “contra natura.”

Nature and man’s interaction with It –this conversation or dialectic– always have been a wellspring of architecture. Saint Augustine did not speak in vain when he echoed the Platonic truism that “nature is the greatest teacher of truth.”

TENSEGRITY

Tensegrity –also known as tensional integrity or floating compression– is an incredibly interesting structural phenomenon now applied by some architects in their structures. In architecture, perhaps because it “looks to nature and does not look at itself in nature,” such a phenomenon does not necessarily always have to be applied, or even be touted as the salvation, from a structural and formal point of view, of a potential “new architecture”. If we buy into this mentality too easily, we might end up living in pumpkins, and like Cinderella, wait for the good fairy to come to transform them into carriages—in the form of a pumpkin.

That said, I have to admit that tensegritic structures are wonderful. I recommend a clear book on Tensegrity by Valentín Gómez Jáuregui. After reading it one understands these structures perfectly, and particularly how truly tensegritic structures can have interesting applications in architecture. But turning them into “the balm of Fierabras” is a long shot. Can you imagine sleeping on a tensegritic mattress? Try it and we’ll talk later.

Understanding phenomena deeply, even understanding them well does not mean that one must apply them all in practice. To give a banal, but effective example: though many architects may admire the flexible, retracting, and light folding structure of an umbrella, we haven’t felt the need to generally appropriate this kind of structure: everything goes well until a gust of wind turns it inside-out and breaks it. We buy another one and it is déjà vu all over again.

And we find ourselves once again talking about the stereotomic and the tectonic in architecture, just as considering everything in stereotomic terms would make us return to the cave, converting everything into the tectonic would make us like the tortoise, the slowest of animals, but carrying his home on his back.

MIRROR

There is a wonderful project that a young Paraguayan architect, Solano Benítez, has constructed: it is a tomb for his father, built with tremendous force and intensity in the middle of the jungle.

To achieve its force, he works with a simple wall of exposed cement and a mirror. He includes nothing extraneous; nothing over here, nothing over there. The whole thing is placed with scrupulous precision in a clearing in the woods, among the trees, so that everything disappears, or seems to disappear.

One might say that he wanted to translate the beautiful line by John Keats, “Here lies one whose name was writ in water,” into architecture since this is what remains: nothing or almost nothing, or rather, nearly everything. That’s right: everything is artificial and wholly artificial. This is architecture.

The mirror is a product of man’s astonishing inventiveness. Can you imagine the envy that Narcissus, who spent so much time contemplating his reflection in a lake, would feel

for the inventor of the first mirror? Current technology makes it possible for mirrors to be perfect and lasting.

Likewise cement, which is also perfectly controllable. Cement is the materialization of permanence, of eternity. The mirror is the materialization of nothingness, of fugacity. *Tempus fugit*.

We find a clear example in the work of Solano Benítez who manages cement and mirrored walls so effectively, like the words in a poem that moves us, with this nearly nothing, the best Architecture. Isn't it obvious then that Architecture is artifact, *Arte facto*?

ADDENDA

Gaspar House is perhaps my best-known work. Its most recognizable image shows the patio with the pool and the lemon tree framed by some white walls that enter and exit from the interior, achieving a very lovely space. Behind the walls, the tops of pine trees peer over, providing the finishing touch to the scene. Some people think the house closes off pure surrounding nature because the house appears closed, and it is; so much so, in fact, that when I write about it, I call it the *hortus conclusus*, using an expression from Holy Scripture that sums up the central idea of this architecture. The truth is that the surrounding natural environment is full of little houses that are far from remarkable.

The owner's demand for absolute privacy led to the solution provided by closed courtyards in the front and back of the building. The entrance, with a single central door, was made through the front courtyard. In both patios, lunar lemon trees were planted, two in each. The central living space opens to the two courtyards on its four sides with large and clean picture windows that make the unify the inside and outside space.

The house is exciting and embodies, as Suzuki's photographs capture well, great peace and tranquility. But if the walls were torn down, the unbecoming little surrounding houses would appear below those pine trees in a landscape in which nature has been insulted.

What we did, in fact, was as artificial as architecture itself. We created an interior landscape in precise dialogue with nature that has proven itself very effective. Of course, it wouldn't occur to us to propose this typology in an open landscape with a distant horizon, for example, facing the sea.

In the same way, we developed similar strategies in the project for the town of Zamora. In front of the Cathedral, a stone building bearing testimony to its historical time, we decided to respond with a known language but with a different composition.

We conceived of a large enclosure of dry, strong, round stone, with large dimensions of masonry cuts, thus creating an artificial interior landscape: artificial and lovely. Within this new landscape of large, sun-soaked stone walls, we erected a box made of the purest glass in the biggest dimensions that today's technology would allow. By means of some strategically placed openings the surrounding landscape is highlighted, and in particular the area around the Cathedral.

Of course the architecture we made there is artificial, and it will be no less so when the large trees we've planted in the courtyard grow, just as the lemon trees in the Gaspar House grew.

We built the BIT Center in Mallorca and the recent Moliner House in Zaragoza in the same spirit: given an inadequate environment, our task was to create a new, artificial landscape that was worthwhile.

A friend of mine, a good architect and a better observer recently remarked to me: "Are you aware that in all of these works of yours that you call artifacts, you've planted trees in open-sky boxes, all of them?" He's right: at the BIT Center of Mallorca, in Guerrero House, and in the back courtyard of the Caja Granada, I planted orange trees; in the Gaspar House, lunar lemon trees; in the Moliner House grape vines, jasmine, and birches; in Zamora, large chestnuts, lime, maples, and cypresses.

Architecture and nature get along better than well, they converse, but they never merge and are never mistaken for each other. This would amount to having understood nothing about either nature or architecture.