



FLAT HORIZONTAL PLANE

On Horizon

The Flat Horizontal Plane, the platform, is more than just one of the most basic mechanisms of Architecture. In this essay, I would like to move towards understanding this Flat Horizontal Plane not only as the primary mechanism of Architecture, but also, when it is erected, as the spatial limit between the stereotomic and the tectonic.

Standing before Rembrandt's precious 1655 dry point engraving, "Christ Presented to the People,"¹ I once pondered how the strokes set down by that genius's hand bring to the fore the central horizontal line which functions as the base of the composition's construction. The upper plane of the stone platform, or stand, upon which the action of the scene transpires is placed at the height of the viewer's visual perspective, so that it becomes a line. This horizontal line is so perfect that one could say that Rembrandt used a ruler to make it. Or better yet, his hand was perfectly steady.

Rembrandt clearly takes inspiration from an earlier engraving by Lucas van Leyden². However, Leyden's perspective is set higher, more at a bird's eye view, so that the main plane is seen as a trapezium. Once again Rembrandt, the master, shows his clear wisdom and skill in the precise handling of spatial mechanisms.

On the other hand, the double terminology that Holy Scripture employs for this place, *lithostrōtos* or *gabbatha*, is very expressive. *Lithostrotos*, as its Greek root makes clear, means "stone floor;" in Spanish it is called "*enlosado*," tiled with stone. Moreover, in Hebrew *gabbatha* means "a raised place," so that between the Greek and Hebrew terms, the rostrum or platform had this double condition of meaning: raised on high and made of stone. Here one can observe the same operation, with other dimensions, that one sees in Athenian Acropolis.

Indeed if Rembrandt borrowed from Leyden's form, correcting it with the perfect horizontal line at eye-level, Picasso in his "Ecce Homo: Le Théâtre de Picasso"³ also borrows from Rembrandt's form and in his very free version conserves the horizontal line from the edge of the top of the pavement, of the *Gabbatha*, exactly at eye-level. And as with Rembrandt, the line is so horizontal that it seems, or is, traced with a ruler.

It is curious how both geniuses coincide, with astonishing premonition, in their perspicacity of understanding the transformation of plane to line at eye-level. Something Mies van der Rohe was to later use in such a defining manner in his Farnsworth House.

A contemporary architect will immediately recall now what Mies van der Rohe attempted and achieved when he put the ground floor of Farnsworth House⁴ at eye level: the plane became a line in front of the viewer, making the house appear even lighter.

So, today I'd like to discuss this flat horizontal plane, Rembrandt's and Mies', understood as the limit between the stereotomic world and the tectonic world.

It is very significant that Jorn Utzon in his well known text *Platforms and Plateaus* begins by saying that "the platform as an architectural element has a fascinating attractiveness. I fell in love with it for the first time in Mexico on a study trip in 1949, where I found many variations of the platform, both in regard to size and condition, and where many stand alone save the natural world which surrounds them." Certainly, it is no surprise that the platform, the raised flat horizontal plane, was the central theme of many of his buildings. The idea of the flat horizontal plane is

so definitive in architecture: it is an idea of yesterday, today, and for tomorrow. The horizontal plane puts man, standing on the ground, juxtaposition to the physical sky thanks to the very gravity on which the human body depends for all of its functions; man has the maximum sensation of balance on the absolutely flat horizontal plane. Furthermore, as this plane is the dividing line between these worlds, the plane is also where they, the tectonic and the stereotomic, come together.

Curiously, Spain's Royal Academy of Language and Letters defines a flat surface as "that which is situated in a position parallel to the horizon, in the lower part of a painting." Moreover, it defines the horizontal plane as something "defined by the surface of a liquid in a state of rest." I say 'curiously' because it uses an unstable physical situation, that of "liquid in a state of rest," to define what is really a stable physical situation, in fact the most stable of all: the constructed plane.

In his book *Studies in Tectonic Culture*, Kenneth Frampton aptly analyzes, on the basis of profound and extensive commentaries on Utzon and his work, the validity of the platform as a universal architectural mechanism.

Likewise, in my long text, *The Establishment of Architecture: On the Construction of the Horizontal Plane: the Podium and the Platform*, I presented a heated defense of the horizontal plane, giving all kinds of arguments that in one way or another stemmed from the analyses of Utzon and Frampton.

In this text, which is, in some way, a continuation of that earlier essay, I will insist still more upon those arguments as well as explain how I have radically materialized them in some of my latest projects.

I intend, once again, to emphasize the how theory must accompany practice in architecture. It's not a matter of drawing some designs, building them and then, as if a ventriloquist, lending them a voice. On the contrary, I would like to demonstrate something that is fundamental to the artistic creation, and even more to the architectural creation: that constructed works are the synthesis of an extended and anterior process of deliberate thought which, in connecting with past history, needs construct future history. This rational-artistic process could be considered "true research."

Kenneth Frampton in the aforementioned book, reconsiders and gives life to some of the forgotten theories of Gottfried Semper; his distinction between the Stereotomic and the Tectonic in architecture is especially brilliant: the Stereotomic, on the one hand, refers to what is heavy-gravity bound, immobile, unitary, and continuous, while the Tectonic refers to what is light-mobile, fragmented, and discontinuous—on the other. Frampton didn't imagine the extent to which new architecture could be generated from that idea he recovered. On my part, I owe the discovery of these ideas to Jesus Aparicio, who after his stay as a Fulbright scholar at Columbia University, brought them to Madrid, and later collected them in his penetrating book *El Muro*, "The Wall."

My intention in this text is to take this one step further and consider the flat horizontal plane as the materialization of the border between the tectonic and the stereotomic.

When man establishes the horizontal plane, he is doing something more important than just satisfying a physical need for stability demanded by the universal laws of gravity. When primitive man settles and takes possession of a place, the first thing he does is construct the flat horizontal plane. Accordingly, from that first moment, in order to control and possess it, he tends to look

for places that are already flat, so that they are found first, and afterwards shaped, fenced in, and delimited. The plane is the earth itself, clearly a stereotomic plane.

Furthermore, when he builds it with light elements, and makes it mobile, he is doing something even more profound: he is raising himself over the earth in order to dominate it. In constructing the mobile and raised horizontal plane, it is already tectonic: man proclaims his recognition of the tectonic world by which he gains a dimension of mobility, and most importantly, freedom. The hut becomes a sign of freedom before the cave.

When Mies van der Rohe builds his Farnsworth House, he is performing an act that goes far beyond merely making his truly beautiful, light, and transparent house. He is, for the first time in the history of architecture, consciously setting the flat horizontal plane floating in the air as an architect. This feat is absolutely key to the operation, and something that Philip Johnson never succeeded in fully understanding.

Given the self-evident perspicacity of the operation, it is not easy to explain why later generations of architects have not repeated, in a general way, Mies van der Rohe's creation of the floating, flat horizontal plane in Farnsworth House. Not even Mies himself did it again, nor Adalberto Libera, whose Casa Malaparte⁵ was a radical proposal to set the horizontal plane as the main floor of the life of the house, like the beginning or end of a stereotomic podium, as if it a small acropolis. Nothing that radical was ever repeated, either by Libera or any other architect.

ADDENDA

The aim in my latest projects: the construction of the flat horizontal plane. In the project Between Cathedrals, already constructed in Cadiz, the Center for Nature Interpretation in the Janubio Salt Flats, Lanzarote, Canary Islands, and in the Van Thillo House in Tarifa, the central theme is the creation of a flat horizontal plane, on high, radical and bare.

In none of these cases does it become flat rooftop that is exploited for other purposes, otherwise occupied, or used for landscaping, as many architects are doing these days in the name of sustainability. Wherever such aims may be, nothing could be further from our idea, and Utzon astutely observes in the last paragraph of his text: "To materialize the platform, make it visible, and avoid its disappearance, is a very important topic when one begins to build on top of it. A flat roof alone does not express the flat nature of the platform."

Speaking for myself, from the very start I have no doubt that the plane must take the lead role in these projects, as the flat horizontal plane is origin of their most central guiding idea. If any emerging element has been eliminated from their design, it was not done so for reasons of either purity or rout minimalism. On the contrary, the spatial force of this flat horizontal plane, of this platform facing nature, is of such a nature that any emerging element could distort it. It is a flat horizontal plane between the stereotomic and the tectonic, between heaven and earth.

It is clear that this is only possible in places that, on the one hand, have a landscape with a distant horizon that renders this operation meaningful, and moreover, have a climate that permits the intended function wide open sky. In all of these cases, in the three projects, the distant horizon is the line of the Atlantic Ocean; the three places possess a privileged climate.

THE THREE PROJECTS

The first of these three projects, already built in Cadiz, the so-called oldest city in the West, is called *Between Cathedrals*⁶. We were asked to “cover an archeological excavation,” and give the city a public space. To do so, we made something more than just a flat roof. We made a raised flat horizontal plane, paved in Macael white marble, and to which we built a ramp for easy access, also placing a white canopy on it to give it some shade. Hugged by the two cathedrals, the platform on high blocks the view of the cars passing in front of it and we are left to take in the sea alone, in an effective operation of abstraction. The immense Atlantic Ocean lies before us, nothing more and nothing less. This type of plane clearly belongs to the tectonic world.

The building in Lanzarote⁷ is situated in the center of the hills that surround the Janubio salt flats that open to the sea. Sitting in the center, at the highest point stands a large, square, and flat horizontal plane, measuring 90x90 meters. This plane is black, just like the lava found throughout the island, and capable of underlining the fascinating landscape we face, endowing it with spatial value. An entrance is dug out in the plane as a “trench”, and some courtyards that will serve the functions housed below are spread out in front of the sea. The shade produced by these excavated spaces gives the operation still greater force. This plane clearly belongs to the stereotomic world.

The Van Thillo House⁸ in Tarifa, Cadiz, also on high, in fact on a coastal dune in front of the ocean, rises up as a square flat horizontal plane, measuring 20x20 meters, and is made of travertine stone. Life takes place on the plane which stresses the seascape before us. An entrance, pool, and an amphitheater, which will also serve as protection from the winds that blow in from the straits, are carved into it. The rest of the house is situated below, facing the sea. This plane also clearly belongs to the stereotomic world.

In each of these three cases, the geometry adopted, open to all four directions, further clarifies the proposed spatial emphasis. This is true, most of all, since in all of the cases they open to the west, the sunset, and also to the Atlantic Ocean: our line and nature's line thus parallel.

Also, as I mentioned, the climate in these places is perfect for these spatial operations. We may recall here how the *azoteas*, or roof terraces, have traditionally been common living spaces in such island and coastal areas. A few well-known Le Corbusier photos could come to mind here as well.

I still remember my experience when, as a child in Cadiz, we ran around the flat roof terraces at home while the women chatted calmly in that privileged, open-sky living room from which we saw the sea and the sunsets. Time there was always suspended. Of course, current technology allows the operation to be taken to its most radical extreme, building these new horizontal planes totally and completely flat.

A radical flat horizontal plane of this sort will, without any intermediate element, exaggerate the spatial qualities of these places I've described with their distant horizons. The distant landscape in front of us, in this case the sea, will seem to be coming towards us since it is accentuated by the line of our flat horizontal plane; or it will seem that we, as if riding on Aladdin's magic carpet, are moving towards it. The living functions, for example, of the solarium where one can descend into a trench in order to take in the sun or of the excavated quarters in which one can seek shelter from the wind, can be perfectly performed there.

In some of my earlier projects, I had already used this spatial resource, in De Blas House in Madrid, in the Olnick Spanu House in New York, and Rufo House in Toledo. In all of them, the lightest part of the building was constructed over this horizontal plane, and complemented the

work with a very good spatial outcome. In these new projects, I insist on a radical conception of the plane that increases the intensity of the operation.

To convince people that it is perfectly possible to realize the intended functions on a radical horizontal plane, bare and flat, it helps to imagine it like the decks of a ship. Standing on a flat horizontal plane is like being standing on the deck of a ship under the open sky, or like being on a raft, as Mies van der Rohe argued when speaking of his Farnsworth House.

And while this theme of the platform frequently appeared in my earlier projects, with some element built on top of it to house practical functions, I believe that the search for refinement in making sure that the upper plane is truly the main plane remains a contribution that can still be made to architecture: the construction of the radical flat horizontal plane. In each case, the material used in their construction, i.e. the super-white marble in Cadiz, the black concrete in Lanzarote, and the sand or travertine in Tarifa, contributed effectively to the spatial dominance of the horizontal plane.

CONCLUSION

In short, we must defend the flat horizontal plane as the limit between the stereotomic and the tectonic worlds. Well-defined in proportions, dimensions, and materials, it remains one of the most basic mechanisms of Architecture since time in memorial. It is bound to the human body by gravity and balance and to the human soul by the indispensable serenity of connecting with the heavenly. According to Utzon, the operation that the Indians sought by raising their platforms to over-look the jungle in the stone age continues to be that which that man seeks in the third millennium: happiness, in our case, through architecture. As Utzon said, "inhabiting the Gods' abode."