THE HORIZONTAL-PLAN

The Foundation of Architecture

PUBLISHED IN

Trece trucos de arquitectura. Ed. ACB. Madrid, 2020

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The ability of man to control his surroundings, in effect to dominate the Earth, is found in his constant reference of the existence of all things through his own being. Taking the argument further is to say Man is able to understand the Limits of the World, the boundary between the grounded Earth and ephemeral Heavens, as a simple line, the line of the Horizon. As an investigation of the position of Man within the world one can understand his security when supported by a firm, stable ground from which to ponder the ends of this grounded state. By clearing and leveling a space on the ground Man is defining for himself and those around him a bounded region over which he has control. In this argument, by defining a region one is creating limits to the extent of the space and in a sense has created a “close horizon” at the boundary between the space that is controlled and that which is foreign. The Acropolis is an example of an elevated horizontal plane, which affords Man the ability to control his surroundings through the reference of the Horizon as a boundary, while providing him with a stable ground on which to sit.

Mies van der Rohe is an example of and individual who had a very clear and precise vision of these limits and went to great lengths in his investigation of the creation of such limits. For Mies, ever element of the building was integrated into his thinking within this framework. When the building is one which is grounded on the earth, a clearing of the land, Mies makes efforts to articulate the procession into the building by carving the steps into the platform. Conversely, when the building is a floating plane, he creates steps which hover, never touching, a series of floating planes for ascension into the building.

This discussion about the horizontal plan is a fundamental one, as it is the key to the establishment of a space. It is the origin of Architecture. When the primitive man erected the sacred stones of Stonehenge, to create this monument, he first had to clear a level plane, and to establish a horizontal plan that would order their arrangement. Additionally, the Acropolis in Athens, more than the sublime beauty of its individual temples, is a proposal of an elevated horizontal plan, at the highest point of that divine mountain. The clarity of its organization shows very obviously in the way the masters drew it when they went to visit. Le Corbusier, Louis Kahn, and Karl Friedrich Schinkel, instead of focusing on the individual temples, or the details ornamenting the various structures, all viewed the Acropolis from a distance, allowing their drawings of it to encompass the entire complex, to take in the general view, underlining the basic operation of the creation of the horizontal plan at the highest point of the city. Additionally, Villa Rotunda, more than its brilliant composition, is clear in its establishment of a horizontal plan, the “piano nobile,” to which a series of grand staircases ascend, emphasizing the idea of the podium.

The beautiful Breakfast on the Grass, painting by Manet, is a portrait of a group seated on a tablecloth, establishing a special link with nature. This simple decision of defining a space on the ground with the use of a tablecloth, or a towel when at the beach, is the creation of a horizontal plan, indicating the limits of the space over which one has control. Once the space has been defined, and the limits clearly articulated, we recognize that

we need protection from the weather, and from other natural elements. We need to be covered by an upper level, by something more than an umbrella, by a roof. And, because it is material, and as it must be elevated to resist gravity, we must support it in some manner with a structure that allows for the enclosure of the space with walls. To cover, and to enclose: two basic architectonic operations, to decide the limits of the space in both the horizontal and vertical directions. The limits of the heavens and the earth. Is the horizon not the boundary between the heavens and the Earth?

RAFT, BOAT, DOCK

“Is the Farnsworth House not a well tempered space between two horizontal floating planes?” By elevating the principle plane of the house to the precise height of the eye, Mies van der Rohe, in a sense, creates the effect of equating the horizontal plan of the house with the Horizon, that indefinable boundary between the earth and the heavens. The ascension to the primary level is slowed by another intermediate plane, while the steps themselves are in effect a series of floating planes. The progression to the enclosed Horizon is essentially the same as the end result. On the primary plane of the house one feels as though one is on a raft floating lightly on the water with nature quietly passing by. The serenity of the space can be understood to be the result of the elevation of the horizontal plan to the precise height of the eye, and the maintenance of a perfect horizontality. Ever concerned with the perfect horizontality of the boundary line of the Horizon, Mies invented a series of inverted pyramids in an effort to eliminate even the slightest inclination of the floor under foot. The Master, obsessed with the notion of achieving the perfect horizontality would not allow for even the slightest inclination under foot.

“Is the Villa Savoie not a spatial artifact on an elevated horizontal plan?” By elevating the main level to such a height and by framing the views out of the house in a particular manner, Le Corbusier creates the effect of standing on the deck of a boat when one is standing in his house with its open views to the sky. Accessed by the circuitous route of the ramp the house controls the pace of ascension as well as the views to nature until one reaches its ultimate height and the box opens itself to the sky. By creating, in a sense, an unbroken vista to the heavens, Le Corbusier ultimately recognizes the necessity to contextualize the view through the creation of the panoramic window which provides a framed view of the connection between the sky and the earth, the boundary, the Horizon. The interest inside, however, is clearly to provide the most direct access to the sky above, in a like manner to the space of the deck of a boat.

“And what is the Utzon house in Porto Petro-Mallorca but a horizontal platform carved into a cliff overlooking the sea?” Engaging the marine analogy further, as Mies created a house as a raft, and Le Corbusier created a house as a boat, Utzon effectively created a house as a dock, by clearing a platform at the edge of the sea, and placing a collection of built elements on the platform. The focus of the entire act of the house is the transition between the earth and the sea. Once inside the house, views to the sea are framed in such a way to raise the horizon to the upper third of the opening, in an attempt to focus the eye to the sea. Where Le Corbusier was interested in the presentation of More Sky,

Utzon, by manipulating the boundary between the sea and the sky, has as his interest the presentation of More Sea.

GRAVITY: WHY THE HORIZONTAL PLAN

Without attempting to make a medical analysis on the sense of equilibrium and the Eustachian tube of our inner ear, it is clearly known that there is a physical relationship between our bodies and the condition of horizontality. In order to remain seated in a comfortable, stable manner, we demand a horizontal floor. In fact, as a means of disturbing the stability and equilibrium of prison inmates, prisons will often create inclined floors in the cells. Additionally, while working we require an horizontal plane, or table. Older architects will remember how easily the instruments would fall from the table when using inclined tables for drafting. Finally, in order for a restful, fulfilling night's sleep we require a comfortable, horizontal plane.

When the primitive man was still dwelling in the cave, he sought various planes that he could clear in order to create surfaces for his various, necessary functions of living. The primary horizontal plane became a general public space for the fire and other fundamental activities. From there he would look for smaller, elevated planes for seating, and additional, more enclosed horizontal planes for sleeping. It is easy to imaging the multitude of activities and situations, which require a horizontal plane having the capacity to control gravity in the life of the man, who is a vertical being. It is the point at which primitive man leaves the cave and imagines building a room of his own in nature from the ground up that he discovers the freedom to control his environment. The primitive man now simply has to identify a horizontal plane, to clear it, and to mark it in some manner, as his own. Similar to the act of animals, although with the key difference of the default geometry of the space as a square, or possibly circle. Finally, in order to create shelter, he creates a roof and holds it up with vertical elements, which also allow for the vertical enclosure, and is left with a creation similar to the Caribbean Hut, which Semper identified, in his Four Elements of Architecture.

THE STEREOTOMIC PODIUM

We could imagine the horizontal plan created through the act of slicing the top of the rock, to ground the architecture in nature. This theory of continuity in constructions creates a podium that is linked to the earth, as though it is born from it. The stereotomic podium is always massive, heavy, and connected materially to the stones of the earth. The podiums by Mies van der Rohe, at the Barcelona Pavilion and the Tugendhat house are very clearly grounded, stereotomic podiums, which he reinforces by carving the steps leading to the house out of the podium. It is interesting to note that when Mies decides to create the horizontal plan on a podium he always carves the steps into the side of the podium. Conversely when elevates the horizontal plan to create a floating platform, he also uses floating planes for the steps and locates them in a frontal position. He will do this in his final masterpiece in Berlin, similar to Palladio in the Villa Rotunda and La Malcontenta.

THE TECTONIC PLATFORM

The main plan, the “piano nobile” appears like a flying rug, or like a table, when the primary horizontal plane is elevated. The platforms of the Farnsworth house (which we referred to as a raft) or the Villa Savoie (which we referred to as a boat) are clear examples of elevated planes floating, an effect which has been made possible with the use of steel and reinforced concrete. The clear idea of the horizontal plan is not a question of old or new, nor of classical or avant-garde, it is a fundamental question relating to the most basic physical condition of man and his attempt to control gravity, and to use it to serve his means. The question of the horizon-tal plan is a universal one, one that is fundamental to our existence.

MIES UP!

The elevated horizontal plan was a key component in Mies van der Rohe’s plan for his proposal of the human domain of the world. Every project by Mies started with a very clear establishment of a horizontal plane, and he would create this using two very clear and efficient methods. The first way is by creating the primary plan as the upper level of a podium, or rock, similar to Semper’s notion of the stereotomic podium. The second way is achieved by floating an isolated plane, creating in a sense a tectonic platform. In both cases, Mies will, very carefully, place this plan at the precise height of our eyes, marking from the very beginning the clear position of the horizon, the point at which the horizontal plane, becomes, like the horizon, a simple line. The procession onto this primary plan was equally important for Mies as he created an ascension always using steps, never a ramp, in a very precise spatial operation. When using the operation of the stereotomic podium he always carves the steps into the side of the podium. In the Tugendhat House and the Barcelona Pavilion the steps are on the side and restrained by a wall, which emphasizes the condition of the excavation of the steps from the earth, of the podium. On the other hand, when using the operation of the tectonic platform, Mies always creates the procession onto the primary plane in a frontal manner. The steps leading to the Farnsworth House or to Crown Hall are both frontal, isolated planes, appearing as though they are floating in the air. It is also interesting to note that in the stereotomic condition, when Mies would carve the steps into the podium, he would always do so without an extended break, or with only a small landing. It is a question of arriving as soon as possible. Conversely, in the tectonic condition, with the floating steps in the frontal position, Mies always created an intermediate platform which allowed him to control the pace of ascension and to allow us to contemplate the transparency and continuity of his architectonic temple, which he is offering. The Master very precisely, places the primary level of his buildings, at the elevation of our eyes, and very carefully controls our ascension into his elevated world of Architecture.