WHEN 2+2+2 ARE MUCH MORE THAN JUST 6

On the diagonal concatenated space

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When the height of a space is 5 meters or more, architects call it a double-height space: a space that can contain, superimposed, two single-height spaces.

If we put together two double-height spaces and move one of them vertically so that both coincide in a common space of simple height, we will have obtained a space that read globally is a diagonal space, a diagonal space of triple height that thus, diagonally, seems to us much larger.

And if through the highest point of that diagonal space we open a high window in the wall or a skylight in the ceiling, and we get solid sunlight through it, we will have made that diagonality more visible.

And if at the lowest point of that space, by opening a low window at the diagonally opposite end, we get that solid sunlight coming through that space, the operation is complete.

And the new space, which adds a double height with another double height, displaced, seems much larger. Proving that, in architecture, 2+2 can be much more than just 4.

This is what I did in the Turégano House, the "white and cubic hut" that I projected in a now distant 1986, I applied for the first time this 2+2, and still every day the simple miracle that when the light crosses that diagonal space everything acquires a special tension continues to take place. Like when the air passes through a musical instrument and makes it sound.

In the Turégano House we also played with a smaller depth in the upper spatial segment in order to facilitate even more the entry of light from the high window to the lower plane of the garden. And this greater verticality made the diagonality pursued even more dramatic if possible.

In the 1999 Asencio House, I used the same mechanism, but with the same depth in the two segments, so, to facilitate the entry of the sun more vertically, instead of a high window I opened a large skylight in the roof.

In the Turégano House, being proportionally more vertical than the Asencio House, the mechanism works more efficiently. Therefore, in the Asencio House, to correct the "lying diagonality", the light instead of coming from a high window (perforated hole in the vertical wall) comes from a large skylight (perforated hole in the ceiling).

Evidently the mechanism of the two double heights displaced and connected reaches its full meaning when, as in the two cases described above, the diagonal space obtained is crossed by the solid light coming from above. If this light were missing, the beauty of these spaces would be more muted, hidden, mute.

Of course, the manipulation of a simple double-height space, opening a south-facing skylight in the ceiling, and opening a large window at the diagonally opposite end, is enormously effective. This is how I did it in the García Marcos house and I am still surprised by its absolute effectiveness.

In the Caja de Granada I used the same mechanism, on a different scale, in the upper part of the large central space. By leaving a high interior terrace, not only was the permitted buildable area not exceeded, but, above all, the light coming from the skylights located closer to the corner, further to the back, was allowed to pass through, which, moreover, are the ones that produce the most surprising effects as the source of this wonderful light is not visible at first glance.

It is surprising that, regardless of form and style, such a simple and effective mechanism is not used more often by architects.

In the Pompeian house this mechanism of the high window was already used, to the south or southwest, capable of providing direct solid light, diagonally, to the whole house.

ONE MORE STEP: WHEN 2+2+2 ARE MUCH MORE THAN 6

Well, this mechanism, taken to the extreme, concatenating the double spaces in spiral, is the one I am using in a new project: the CALA House in Madrid-Camarines in which I am now working. It is a further step that gives rise to a different typology, more radical and, I hope, even more beautiful. Here we work with three double spaces that are diagonally concatenated two by two, in a spiral, so that the resulting space acquires an ascending tension of great spatial interest. At the appropriate points, skylights open in the ceiling or high windows are conveniently oriented. The tension reaches its peak when the light moves through the space throughout the day. It becomes clear here that, just as air in a well-tuned musical instrument produces music, so does light in a well-conceived and well-developed architectural space.

In short, in architecture it is not only necessary to have ideas and the hands capable of putting them into practice, but also the knowledge of mechanisms such as the diagonal concatenated spaces, well agreed with the light, to ensure that the architectural space produces that distentio animi, that suspension of time that we architects want for our works.