

THE HEAD FITS WELL IN AN IDEA

On large scale models as a tool for the analysis of the projected space

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I have written that "an idea fits well in one hand". And for this I have required my students for a long time to make their first model, the model that would translate their idea, of such a size that it would be able to be collected in one hand. As a synthesis of the projected space. Then I thought it would be good for people who are learning to see and to do architecture to put their noses in the space, to put their heads in the space: to build a model so big that they would be able to put their heads in it. As an instrument of analysis of the projected space. Analyze and think, think and analyze, and conclude.

Said and done. At the beginning of May 2013, at the end of the course, the tables in my classroom at the ETSAM were invaded by a huge collection of enormous models. For me it was very exciting to see how perfectly they had understood the proposal and how well they had worked, qualitatively and quantitatively.

The theme proposed as a course exercise was that of a convent church on the island of Nisida in Naples.

And there appeared a splendid collection of these enormous models with which, logically, it was possible to articulate classes with great pedagogical efficiency that all the students, more than a hundred, followed to the end without losing the thread for a second. You could put your head in all those models.

And there we talked about the place, the measurements, the precision, the light, the materials, the general ideas and the particular details.

When I suggested to a student, Andrés Pérez Fraguas, to ask the first question to another student, Rubén Conde, author of a wonderful project with a rectangular straight parallelepiped model made of gray cardboard, after putting his head in it, he got it right with his first question about the dimensions. And as chance would have it, the measurements, to scale, of the reality of what was projected, were almost exactly the same as the classroom we were in, 21x7x5 meters. A classroom designed by Mr. Pascual Bravo and calculated by Mr. Eduardo Torroja. Making a direct comparison between this model and the teaching space was pedagogically very effective. Once the dimensions had been trapped, the analysis continued with the materials, the light, the proportion and other components of the architecture.

And how if the project was fair-faced concrete on the outside, it could also be fair-faced concrete on the inside. Or maybe white, like a fruit. But if it had been white on the outside, it would not be so logical that its interior would have been solved with exposed concrete. And all kinds of questions of this nature.

Then we moved on to the light. The student had opened a skylight all the way up, facing north, in the horizontal plane of the roof. So that the solid light coming from the south could never pass through the interior space, which was what the student intended.

Putting that model under the sunlight in both positions, the comment was obvious. So I convinced him to change and place the skylight to the south.

For, just as in a model that fits in one hand it is necessary to synthesize everything as much as possible in order to get rid of all the accessories and go to the center of the idea, in the large, very large model, many other aspects of this more developed idea can be clearly seen.

Light needs precise dimensions. Being the model the most suitable instrument to simultaneously understand the three dimensions of the projected space, it is even more so when we put it under the light of the sun analyzing how this space reacts. And in a clearer way when the model is of a larger dimension.

It is discovered that light always comes from above, and that a skylight is no trivial matter. And that a skylight is no small thing, and that the position and size of skylights must be very well thought out.

I still remember the emotion with which I saw, still only in structure, how the sunlight crossed the central space of my building for the headquarters of Caja Granada in Granada, the one they call the cube. The 6x6x3 m deep skylights responded precisely to the project. At the time we had made a huge model where you could put your head. And although the cube was oriented to the south according to the diagonal of the square of the floor plan, I had already decided to open only the skylights in the south corner so that the sun inside could reach the ground, after walking along the vertical dihedral, which I would later decide to make of white alabaster.

But that great model, huge, with whose images I won the competition thanks to an honest jury chaired by Rafael de la Hoz father, had the 3x3x3 m skylights. With that model in front of me, I could make a clear analysis which, in the light of reason, made me see that those dimensions, identical in all three dimensions, would only allow the sun to pass through when it was very vertical, at its zenith, at noon. I then changed those dimensions of the skylights to 6x6x3m. Not only then did the sun come in and come in in torrents, but also the structure was conveniently lightened by half.

All thanks to that huge model where, in addition to being able to put one's head physically, one could get into the most architectural analysis. That is why I now propose it to my students.

I have once told how a good friend of mine, a very wise engineer, reproached me for making my students make models. And he argued that nowadays it is much better to work with the computer that allows to control the three dimensions so well. My argument, unanswerable, was that I had never seen any architect put his computer under the sun to see what was happening. A model, in addition to the aforementioned simultaneity of the three dimensions in movement and the relationship with the human body, allows the space represented there, to scale, to react truthfully when placed under the sun.

N.B.

I can only repeat what I have already written when it came to the smaller models. That there is nothing more satisfying for a teacher than to test the validity of new teaching strategies applied over the years by the hand of experience. In this case from the head of the students who must be able to enter these large models. It is not for nothing that I try to convince them, big heads! that reason, the head, is the first instrument of the architect.