The climb to the belfry of the Cathedral of Turin: a means for the executive plan
by Luca Piazza
Tutor: Gianfranco Cavaglià
Co-tutor: Giuseppe Pistone

During the academic have addressed many aspects of the architecture of which was not known to exist, such as the various teachings on scientific grounds or testing of construction technologies. In the popular imagination, the architect is seen as a professional who "draw houses". After facing a degree in architecture is considered appropriate to specify that it is not. In the course of degree (construction), especially, have been addressed various issues which have contributed to enriching the interest in teaching and mainly the curiosity of knowing how to build. The development of this thesis comes from this idea: the subject and the project, represent a means to address more realistic and possible professional architectural design.

The experience of the final design, has led to the development of four project ideas, useful to find a solution to the main objective represented by the slope of the bell tower of the Cathedral of Turin. The aim of the thesis is completed during the course of study of the project, in fact, starting from the definition of implementation projects, he came up with a solution that does not correspond to the objectives initially pursued.

This reasoning has helped us to develop a reflection of type design.
In practice, perhaps because of timing issues, we often focuses on the first solution examined. This means that, in addition to losing the opportunity to investigate the true critical aspects of the final project, we omit the objective and the most advantageous solution to the problem.

In dealing with the preparation of this thesis was started with the assumptions mentioned above: they wanted to make a project executive of the only cases considered. By comparing with the Rapporteur identified a number of critical aspects of the project. The search for the solution of these issues has led to consideration of a new project.

From that moment there was realized that the choice of one solution would be bound to find the criticality of the work. This is how the idea to evaluate four hypotheses that were going to investigate, or resolve those issues that prevented the realization of the first solution considered. Of these, two were addressed at the executive level and two at the preliminary. Finally to find the best solution was carried out a ‘qualitative analysis of type SWOT (strengths - Weaknesses - Opportunities - Threats).
The type A involves the insertion of an elevator system in a central location allowing the maintenance of existing stairs, sometimes to the detriment of masonry which should be partially demolished for the passage of the cabin. In compliance with the existing building it was decided to propose a solution that did not alter the static behaviour of the building but above all that presupposed internal demolition operations. Thus the type B involves the insertion of a facility linked to the external facade of the tower. Reasoning about time in that area is designed to exploit the holes already present for the passage of the steps to introduce 4 installations to ensure the climb floor by floor until you get to the bell chamber (Type C). This proposal is detrimental to the existing staircase forcing, in some places, the demolition of parts of the existing ramps, but maintaining and preserving the vaults of masonry. The last solution (Type D) that is reported, allowing an overview of the city, without going to affect in any way the existing one.
These 4 cameras installed in the oval upper windows of the belfry and thinking to a point of observation on the ground floor. After this phase is followed by the detailed analysis executive for the first two types of drafting proposals with details of up to 1:5 scale, this was possible mainly for the active work with professionals. (“Primafase srl” of Sett. Torinese, “Studio Corona”, structural engineering, Torino).

Construction details to scale 1:5 (out of scale here). A particular type of new slab designed for landing in the belfry. Type B special coupling of the external structure of the plant

Following the arguments made is it intended to propose an analysis of the four project ideas using this technique.
Given the situation we decided to propose a scheme to go to list the characteristics of projects so that each person has an overview and can express their opinion without being constrained by the preferences of the designer. It follows that, depending on which parameter is a reference solution seems better than the other, for example, if we analyze mundane construction costs, it turns out that the assumption D installation of cameras, is the best or rather, is that it costs less. At the same time if we consider the aspects of usage, we find that the same solution that was first demonstrated more appropriate not to grant access to people with disabilities while maintaining a degree of privatization, exclusive only to people who can afford to go about forty meters stairs.

Summary table of comparison: SWOT Analysis

At the end of this experience I can say that the role of the architect, in my opinion, that person should be able to reconcile the opportunities and knowledge for all professionals who will participate in the project. To prepare a draft Executive you must have a minimum knowledge of all the actors who will implement the working drawings. Only then can get a detailed design as close to reality.

For further information, e-mail:
Luca Piazza: place_1@libero.it

Maintained by:
CISDA - HypArc, e-mail: hyparc@polito.it