



POLITECNICO
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Honors thesis

COURSE OF ARCHITECTURE FOR THE RESTORATION
AND PRESERVATION OF ARCHITECTURAL AND
ENVIRONMENTAL HERITAGE

Abstract

**Casa delle Colonne,
an Antonelli's project**

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The thesis analyses the study concerned *Casa Ponzio Vaglia, Aghemo, Ferrogio*, known as *Casa delle Colonne*, a rental property designed and built by the architect Alessandro Antonelli in the second half of the 19th century in Turin, for the expanding area of Porta Nuova. It is considered by experts the culmination of Antonelli's search for rental property. The aim of this research work is to find a justification for this claim, by identifying those representative features for the theoretical and constructive aspects and by understanding to what extent the original structure is still retains today.

The first approach concerned the knowledge of the figure of the architect, by outlining through his learning process the inherited theoretical and practical aspects.

After the preliminary bibliographic research, it was necessary to analyse the manuals of the time, in order to understand a way to project and to build in the 19th century in Piedmont, and the activity of pupils, such as the son Costanzo and, especially, the brothers Crescentino e Leandro Caselli, which used the constructive system, called *antonelliano*, in their first projects.

In order to understand the key aspects of *Casa delle Colonne*, the civilian buildings, designed by Antonelli, which are similar in context, in function and in design, were analysed. The purpose was to find the common aspects that we allow to track the evolution of the Antonelli's method. *Casa delle Colonne* represents the maximum result, reached by Antonelli for rental properties.

The defined general framework serves as a support to the theme. At the base of the *Casa delle Colonne's* design, the main aspects are the modularity, the reproducibility, the functionality, the flexibility and the economy. The constructive technique was examined: Antonelli shall adopt a structural system, which is characterized by the presence of brick subtle elements, connected by arches with tension rods and vaults, and the symmetrical and regular distribution of the parties.

The comparison between the masonry thickness, derived from Rondelet and Curioni's formulae and rules, and those present in *Casa delle Colonne* showed the diversity about the design of the building: the Antonelli's system was made of individual elements, that contribute to the static structure.

Furthermore, the analysis of the Antonelli's civilian buildings allows to make a study about the economy of the structure, on the basis of considerations formulated by Rondelet and written by Milani. The maximum constructive economy was achieved with *Casa delle Colonne*.

Nowadays, this building seems to externally preserve his original appearance, while the suffered historical transformations, detailed through the analysis of building practices, altered the internal composition in different ways.

In conclusion, the research work, conducted in this Antonelli's building, considered the culmination of an evolutionary process about methodological and constructive aspects, is a starting point for further considerations about his structure and a possible support to the knowledge of the Antonelli's constructive technique, although referring to a specific object, like *Casa delle Colonne*.

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