

POLITECNICO DI TORINO  
FIRST SCHOOL OF ARCHITECTURE  
Master of Science in Architecture (Construction)  
***Honors theses***

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**People meet into the library: project of a public library in Turin based on accessibility criteria and the study of daylighting**

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The library is one of the services, essential for cultural development of the citizen, who have to be rethought to adapt itself to the current social context and to change its appearance and organization of space, which must be adapted to new way of use by users.

A theme, the library, complex and full of new items, but definitely present, on which the city of Turin has invested particularly.

The suggestion to design a new library born in this context, inside a building used as a temporary storage in the Pozzo Strada at the edge of area 3 of the City of Turin.

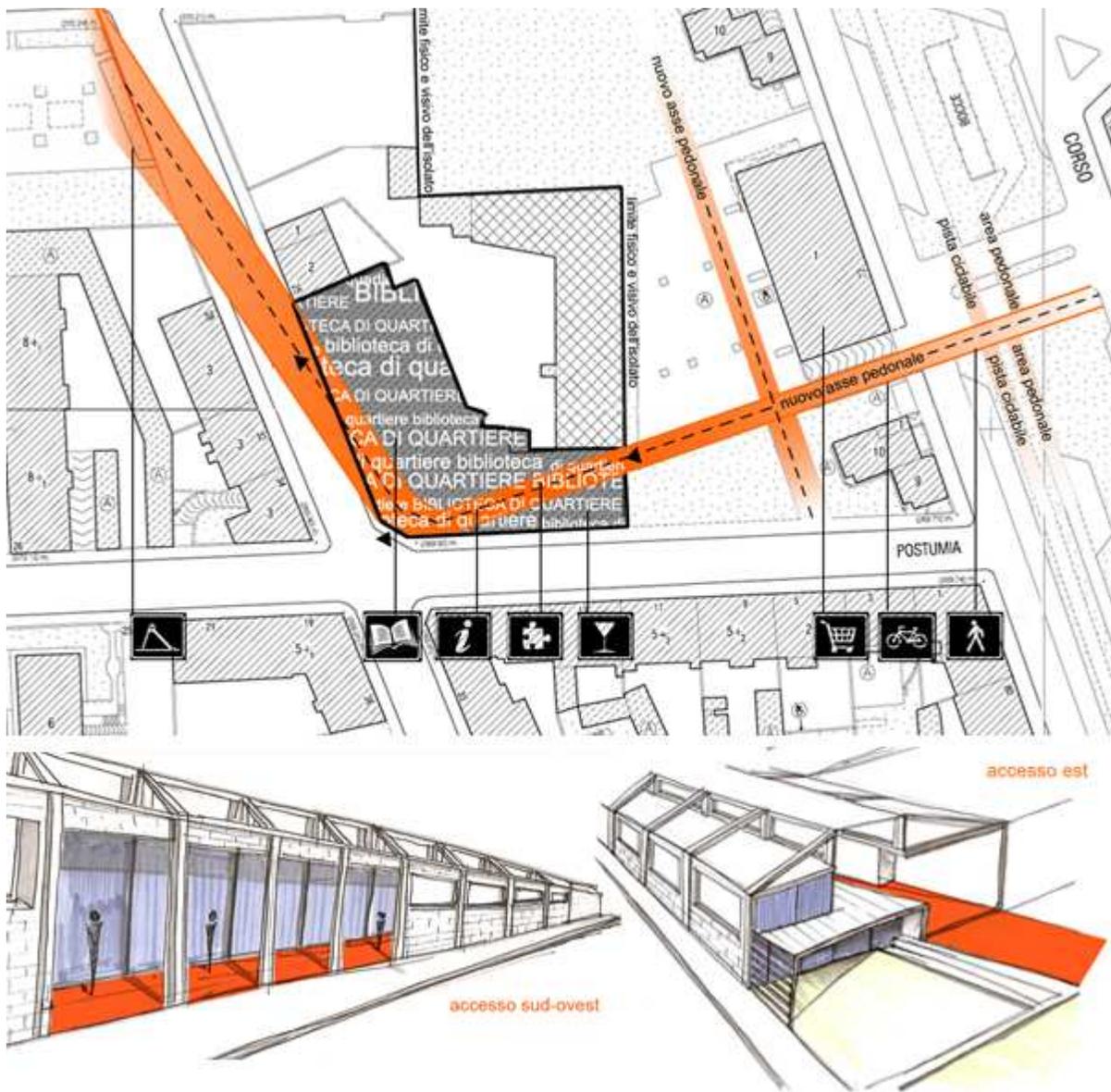
The proposal was made by the director of the library system in Turin, Paul Messina, in the workshop took place in the academic year 2008/2009.

Following this experience, a personal interest in the topic of public library led me to explore in more detail the dynamics that govern the ongoing need to reprogram the entire service.

The objective is therefore to organize spaces in the library according to a criterion defined from functional program, the urban context, the needs of the welfare and comfort derived from the quality of natural lighting within the building.

The decision to keep the form and the existing structure of the building was dictated by the desire to avoid the cost and disposal problems resulting from the demolition process, but also with a will to preserve the formal qualities of architecture, the identity of location and shape of the building that promotes, through wide, high and brightly lit interior spaces, a good quality of natural lighting.

Starting from the area and the salient features of the site have been defined lines of development of the project, aimed at promoting the visibility, accessibility and use by citizens.



*The "public way"- The analysis of flows define a new pedestrian axis*

The relationship between the city and the library is one of the key elements to consider in order to integrate the building into a new system of paths designed to convey the main pedestrian flows to the building and emphasize the centrality of the library within the district.

The library then becomes a place of passages, where different audiences can mingle and not be segregated interest or cultural levels.

The interior layout is also based on the need to separate the quieter areas (reading room adults and teenagers) from noisy ones (workshops, children's room, cafeteria), the desire to connect visually or physically some activities, to have certain areas usable (auditorium, cafeteria, dance, services, etc.) independently of the opening hours of the reading room and finally to separate users paths from library staff ones.

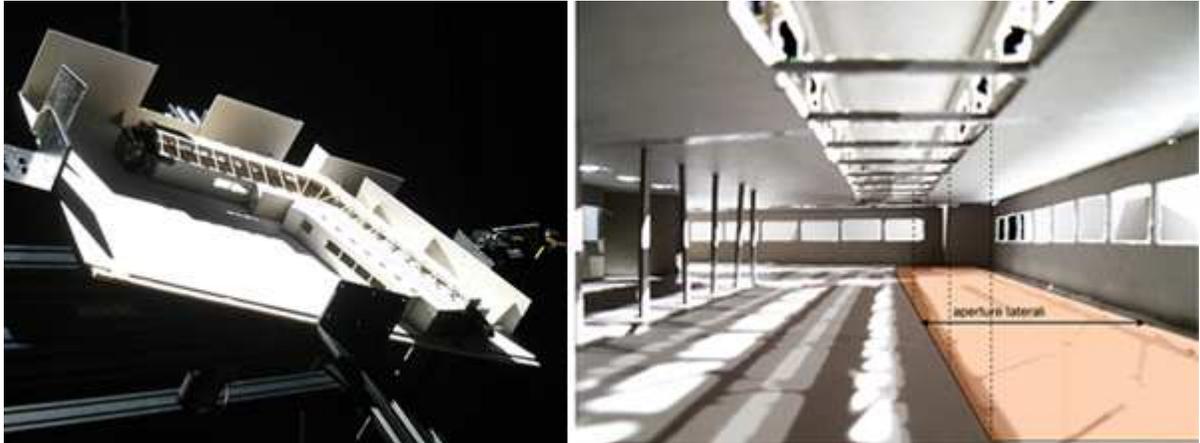


*Distribution of internal spaces*

The internal distribution is the result of integration between the needs dictated by the functional program and the study of natural light, which become an integral part of the design process and help to define the look of the project.

Daylighting, in fact, is not only a necessary element to ensure the psychological and physical wellbeing of the occupants and reduce the costs incurred from the use of artificial light, but also a key instrument to facilitate orientation and to define clearly the hierarchies of spaces and paths. The study of daylighting was divided into three phases:

- evaluation of direct radiation into the building through the simulation of a scale model at the artificial sky
- quantitative evaluation of the values of daylighting through numerical simulations
- final evaluation of design solutions.



*Study of natural lighting - analysis through artificial sky and software Ecotect and Daysim*

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