

POLYTECHNIC OF TORINO  
FACULTY OF ARCHITECTURE  
Degree in Architecture  
*Honors theses*

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**Knowledge and exploitation of Maggiore Sqare in Mondovi' . Project of Environmental Lighting**

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The Degree Thesis "Knowledge and Exploitation of Maggiore Square in Mondovì - Project of Environmental Lighting -" was born during Academic Year 1997/1998 in the Workshop of Ending Synthesis WS082 "Knowledge, Estimation and Project for Preservation and Restoration of Little Town" (Prof. Arch. Chiara Aghemo, Prof. Arch. Paolo Bertalotti, Prof. Arch. Ida Cametti, Prof. Arch. Patrizia Chierici, Prof. Arch. Gemma Sirchia, Prof. Arch. Maria Grazia Vinardi) with support of Optional Course W2172 "History of Town and Land" (Prof. Arch. Giovanni Maria Lupo) and of Optional Course W5271 "Technology of Architecture" (Prof. Arch. Clara Bertolini, Dr. Arch. Anna Godio).



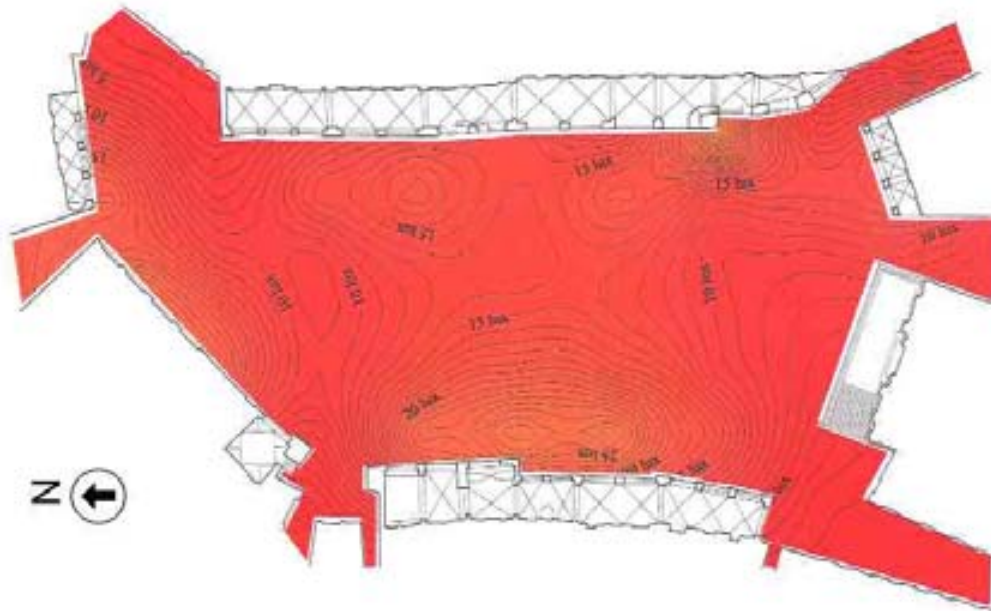
Then, connecting teaching notes of Workshop and Courses, it was investigated topic of Lighting, of History and of Estimation; one of most important assumption was to deepen specific topics without losing complexity of the problem. The Degree Thesis divided in three parts.

Title of first one is "The Knowledge" and in the first chapter it analyses procedures of place's survey, from problems of its delimitation (Where does Square "start" and where does it "end"?), and of choice survey's methods (Is this an architectonic survey or an urban-environmental survey?) as well as drawing problems. Second chapter speaks about historical research from description of sources used ("the object" as document of itself, daily newspaper with important news from second half of ninth century to thirty years of twentieth century, documentation kept in municipal archives as Deliberations of Town-Council, and still less pictures taken from a great private collection of postcards) to the evolution of public lighting in Mondovì and especially in Maggiore Square to have some cues for project.



Private collection, [Anonymous], *Mondovì / Piazza Maggiore*, Mondovì, Before 1901

Third chapters speaks about the survey for lighting project:: analysis of road traffic and analysis of existing lamps using two types of form, the first one to identify different types of theme, the second one to voice an opinion about firmness, efficiency, physical and environmental compatibility of every lamp. Last chapter of first part speaks about analysis and modelling of "environmental Square system" with survey of some lighting parameters: horizontal illuminance, semi-cylindrical illuminance and luminance (in teamwork with Laboratory of Analyses and Modelling of Environmental Systems - Faculty of Architecture of Turin Polytechnic School). Title of second one is "The Exploitation". After the analyses of supply of bulbs, lamps, and supports, it considers set of rules about public lighting plant and especially about "lighting pollution"; moreover it defines lighting parameters. Fourth and fifth chapter speak about the Project of Environmental Lighting of Maggiore Square fixing requirements, aims, best view, project rules, categories of intervention and lighting parameters values.



Numerical simulation of horizontal illuminance levels on the Square (project) made with Surfer (Scale 1:500)

Last chapter speaks about project financing.  
The third part gives some advices to architects who have to work out a Detailed Public Lighting Plan for excellent parts of little town.  
The purpose of this Degree Thesis is to show that using light as "building material", we can magnify excellent parts of little town without other actions on historical buildings.