

POLYTECHNIC OF TORINO
FACULTY OF ARCHITECTURE 2
Degree in Architecture
Honors theses

Saint Anthony's monastery in the Red Sea desert : description and evaluation of the conservation conditions and analysis of the consolidation yard

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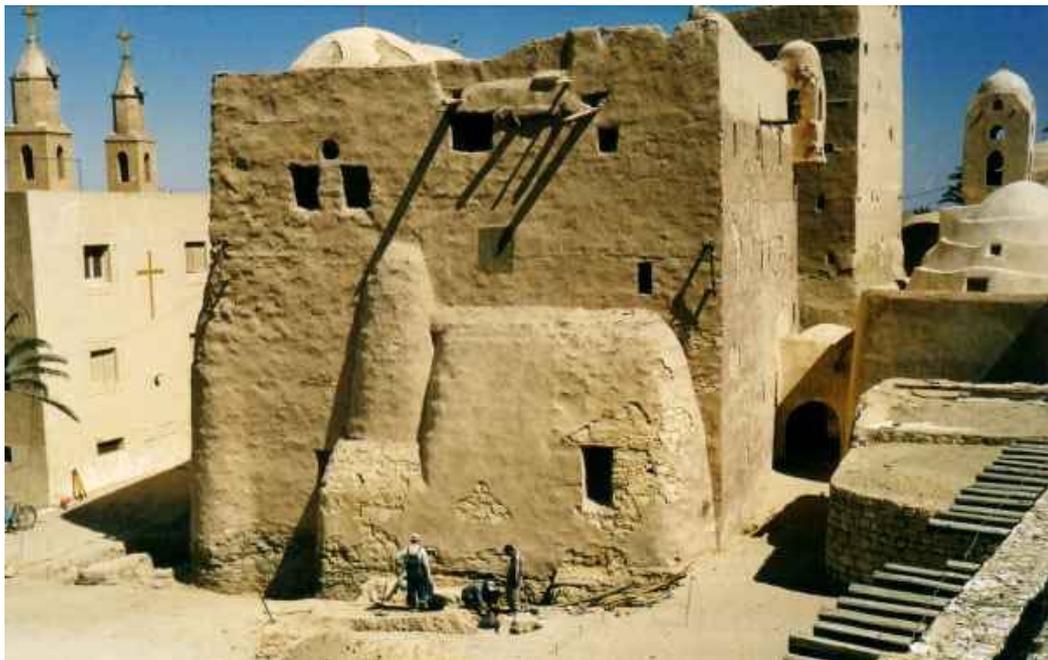
The study for the thesis started from a field experience in the coptic monastery of Saint Anthony The Great, in Egypt, along the summers 2002 and 2003.



Saint Anthony's monastery

The activities carried on concerned, first of all, the preparation of the monastery's museum, the restoration, the cleaning and the catalogue of the objects for the exposition. The presence on field gave also the opportunity of following, from a privileged observatory, every stage of the different building's restoration- since the consolidation to the conversion of the use-. These works gave also the possibility of collecting sample materials and learning local constructive techniques, especially thanks to Michelangelo Lupo, architect charged of the restoration, and his workers help.

The research has been supported by an historical inquiry- developed with the correlation of Mrs. Chiara Devoti - that dealt with different periods of the monastery, since his foundation by Saint Anthony in the fourth century, as a place for living and praying, until its expansion through the ages; the research shows the following transformations through its conformation as coenobite site, until its extension in progressive stages, quite recognizable in the present structure of the monastery. This step of knowledge, started on the yard with the collection of testimonies from the monks of the community, has continued with the research of travelling journals – actually conserved in the Bibliothèque Nationale de France in Paris- wrote by pilgrims and travellers who visited the monastery through the ages. The historical section is probed also in the appendix, through some comparisons between the origins and development of the Coptic monasticism, and the principal characters of occidental monasticism, from the beginning to its evolution with Saint Benedict's rule. The following section of the work develop the research about local constructive techniques, with a detailed analysis of different structural elements – foundation, walling, roof covering..- , construction materials employed on the yard and restoration techniques, between tradition and modern technology. These chapters –developed with the correlation of Mrs. Luisa Stafferi- also contain technical cards, pointing at scientific denomination, localisation, mechanical characteristics and ways of employment of different types of wood and stones.



The *rubbatya* before restoration

The main part of the thesis – conceived with the collaboration of Mrs. Rosalba Ientile- concerns the *rubbatya* – the ancient refectory- : this study has been developed with the purpose of valuating and representing the conservation conditions, through the architectural elevations and the analysis of the alterations and structural problems; the section is completed with the static controls of the vaulted structures, according to the Mery's calculation method.

The analysis dealt especially with the research of structural problem's causes and studies the foundation's ground typology also describing the problems of differential ground sinking; the following chapter presents the consolidation's interventions really executed on yard, through foundation piles and punctually cracks closings.



The foundations piles for the *rubbatya* consolidation

A last short section finally considers the *rubbatya*'s transformations, the archaeological discoveries and the interventions that have been turned to convert the building to a "museum of itself".

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