POLYTECHNIC OF TORINO FACULTY OF ARCHITECTURE Degree in Architecture <u>Honors theses</u>

Restoration in Pompei – Restoration Coverings

by Chiara Maria Salassa Tutor: Donatella Ronchetta Co-tutor: Delio Fois, Salvatore Ciro Nappo

<u>CHAPTER 1</u>: a history of the restoration coverings through bliographic and graphic documentations

The lack of certain and incontestable documentation on Pompeian houses roofing system, required a research of the graphic and bibliographic material to refer to, and its relevant analysis.

The documentation at hand may be divided into two groups:

1. De Architectura by Vitruvius and its translations.

2. **Drawings** and **graphic reconstructions** made by visitors studying the ruins of Pompei since the beginning of excavations in 1748. The analysis of the documentation (25 sources, in this study), and their pertinent iconographic apparatus, showed that, till now, the problem of the roofing system was never seriously considered in detail, evidencing the relationship and the connection of the structural elements. As a conclusion of my analysis, comparisons and calculations work, I propose a possible solution.

CHAPTER 2: a historiography of restorations



In this chapter I placed side by side the study of the bibliographic documentation referring to the restoration coverings and the result of an analysis *in situ* of the coverings present conditions. The restorations documentation has been included in chronological order, referred to the Superintendents, who worked at excavations from 1748 till today. Of each Superintendents I underlined:

Goal: no reconstruction at all; reconstruction of a simple roof to protect the frescos; reintegration and/or reconstruction of roofs that "gave to the house its ancient light"... **Type of restoration**: stylistic reconstruction; philological reconstruction; simple covers reproducing the sky-line...

Materials: traditional (wood and tiles), non traditional (reinforced concrete, steel, asbestos lumber, polycarbonate...)

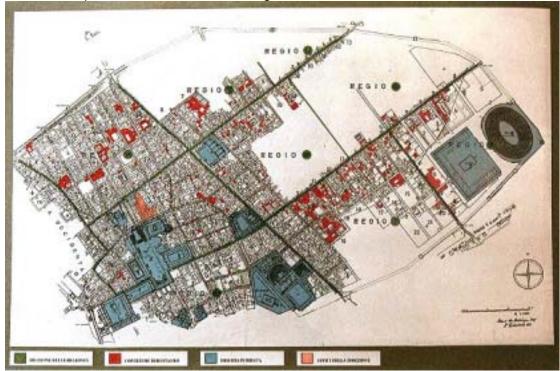
Evidences: disappeared coverings; partly existing coverings; completely existing coverings.

The analysis *in situ* was indispensable, because of the complete lack of a general, able to provide an outline of the restoration coverings. The first step was to draw up a general map of the restoration coverings; then I developed the study, evidencing the material used for the roofs (r. c., wood, steel, asbestos lumber, polycarbonate...); There are 29 different typologies of covering, divided into three groups:

- 1. compluvium
- 2. sloping roof
- 1. horizontal roof

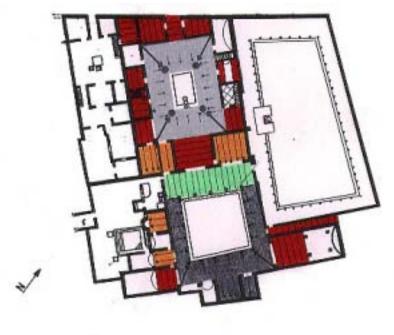
The constant comparison between documentation and reality, allowed me to prepare**149 cards**, one for each house in which there is at least one roof; each card includes the **plan** of the house (scale 1:500 cm), the **typologies of covering** (each marked with a different colour), and the **bibliographic documentation** of the restoration, in chronological order (when such documentation exists).

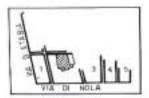
General map of the restoration coverings



Division of Regiones, restoration coverings, pubblic buildings, Directional Offices

The House of the Silver Wedding [V, 2, i]





• 1875-1893 : "restoration with pure architectonic value" of the atrium [1950, Maiuri]

• 1906-1910 : covering of the Rhodian peristilium [1950, Maiuri] with beams of r.c. and tiles of concrete.

1907-1908 : restoration of the oecus corinthius [1908, Sogliano] "Once we obtained the sweep and the extension of the ancient ceiling, with the help of the plaster remains covering it, it has been easy to rebuild the brick-vault, to which the plaster was once adherent." Restoration of the horizontal ceiling next to the oecus with a brick-cement structure. Restoration of the atrium tetrastylon and of the rooms next to it [1908,Sogliano]. The sloping beams that join the corners of the atrium with the four columns, the rafters, the lintel that links the columns are made of r.c.; the two rooms on the right and on two wood left of the tablinum have and tiles sloping roofs: the the coverings of the aforesaid alae and cubicoli have been rebuilt following the traces of the ancient coverings [1908, Sogliano]. The cylindrical vault of the passage on the west side of the tablinum, between the peristilium atrium [1908, Sogliano] and the has been rebuilt. Altogether 10 rooms were covered according to the ancient drawing and 4 with simple protection roofs [1908, Sogliano].

• 1977 : planning of mosaics, paintings and coverings restoration [1977, Cronache Pompeiane].

- 1978 : laying of reinforcing bars for the compluvium of the atrium [Arch.fot].
- 1979 : restoration of the atrium.

CHAPTER 3: the problem of degradation

Also in this case I referred to the present situation of the restoration coverings. After some consideration about the causes of degradation (earthquake in 1980, vegetation, tourist erosion, atmospheric pollution, upkeep and restoration), I elaborated some cards, one for each typology of covering, where I underlined the kind of degradation checked inside the houses.

CHAPTER 4: the praedia of giulia felice: a practical case

The information obtained from my study as developed in the preious chapters, brought me to the choice of a practical case, for which I would suggest a **possible intervention methodology** as follows.

The Praedia of Giulia Felice have a very interesting story; it was the first house to be completely investigated in 1755, covered up again in 1757 e brought to light once more in 1952-1953; today it is one of the most compromised and precarious houses of the whole Pompei.

The study begins with the **history** of the building and of the interventions; there follows an analysis of the present **degradation** condition, that focused my attention on four rooms (the garden portico, the *atrium tuscanicum* with entrance at n. 10, the bath entrance and the *atrium* on Via dell'Abbondanza, that is those showing the most evident degradation).

I made a **structural analysis** of the present conditions, and proposed an **alternative solution**: the substitution of the existing coverings with new ones in **laminate wood**. The material choice (laminate wood) is in accordance with the current trend, also in Pompei, not to use incoherent and anachronistic materials with ancient structures.

The laminate wood is a traditional material employed with modern technology; in this way it is possible to carry out an intervention evidently declared as such, thus avoiding an "historic false", but using a material consistent with the original structures.

Each **roof** was **dimensioned** and **verified**, in relation to the light to be covered. In the garden portico and in the bath entrance I respected the drawing of the original coverings, since the cadence of the beams is well known (traces in brick-work can still be seen, indicating the cadence beams position). The roofs of the two *atrium tuscanicum* (the one with entrance at n. 10, and the other one on Via dell'Abbondanza)) allowed me to propose my solution, with particular stress on the articulation of the structural elements, according to an "ancient drawing".

For further information, Chiara Maria Salassa, e-mail: tafuri.k@ipsnet.it