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Symposium report

***Guarino Guarini's Chapel of the Holy
Shroud in Turin: Open Questions,
Possible Solutions***

18-19 September 2007, Turin, Italy

Abstract. Sylvie Duvernoy reports on the symposium on Guarino Guarini and the Chapel of the Holy Shroud, held in September 2006 in Turin.

In mid-September this year, the Archivio di Stato of Turin hosted an international symposium dedicated to the study of the Chapel of the Holy Shroud in Turin and its designer, Guarino Guarini, organized by Kim Williams and Franco Pastrone, and sponsored by the Archivio di Stato and the Direzione per i beni culturali e paesaggistici del Piemonte.

The Chapel of the Holy Shroud is an astonishing construction in which architectural design, decoration and static requirements are united in complex relationships that are not easy to understand and clarify. It is a major monument of Italian Baroque architecture and its architect – Guarino Guarini – is among the great figures of the Italian *Seicento*, together with Bernini and Borromini.

Because some pieces of the interior marble cornice had fallen, the Chapel was closed to the public in the early 1990s, and inquiries into requirements

for its stability and maintenance were made. Analyses showed that the cause of the fall of the marble pieces was not due to structural problems, but instead to the intrinsic weakness of the Frabosa marble, whose veins and mineral structure, over time, lead to cracking. Only slight repairs and a thorough cleaning were therefore necessary. Unfortunately, on the night of 11 April 1997, when the required maintenance was already complete and the scaffolding that had been erected inside the chapel during the work was ready to be dismantled, a fire broke out in the scaffolding itself, and developed over the course of two hours before being discovered – thus devastating the entire building – before the fire brigade reached the monument. This world-famous catastrophe resulted in enormous damage to the Chapel:

the whole stone covering of the interior was ruined, having exploded due to the change of temperature from the heat of the fire and the cold of the water used to extinguish it. The glass of the windows burst out, and some of the structural iron cables broke. Were it not for the prompt action taken by the firemen themselves (the only people allowed to work in no-security conditions) the dome would have totally collapsed.

The events that occurred that night, together with the results of the early studies that were undertaken in the months that followed, were already reported in the *Nexus Network Journal* (vol. 6 no.2, 2004) in the transcription of an interview with Mirella Macera (Superintendent for architectural, landscapes, and historical monuments of Piedmont), Fernando Delmastro and Paolo Napoli, (the architect and the engineer in charge of the preliminary studies for the restoration project) conducted by Kim Williams.

The September symposium was intended to be a sort of report on the work and studies in progress, now that the judiciary process is over and that the operational phase of the restoration can start: a kind of pause for reflection during which scholars from many countries gathered in order to share information and ideas. The talks and discussions followed two main themes: the Chapel itself (its structural analysis and architectural design), and the Chapel's designer: Guarino Guarini.

As the first speaker, Mirella Macera described to the audience the updated situation of the so-called *cantiere della conoscenza*, i.e., the latest progress in knowledge that has been made while cleaning and classifying every single stone piece of the interior veneer of the Chapel.

Just after this introduction, Paolo Napoli brilliantly explained the complex structural system of the whole building, pointing out the differences that exist between the original drawings by Guarini and the final form of the dome itself. In these discrepancies lies the very core of the restoration problem, since the orientation of the restoration project will depend on their interpretation. The historical documentation is fragmentary and discontinuous. Guarini's drawings do not fully describe the construction process, and no written data regarding the modifications and adjustments that he had to do while completing the structure is available. Debate about his original intentions and options is therefore open. And since the general cultural attitude in Italy regarding architectural restoration is strongly linked to the faithful adhesion to the original intention of the designer, the importance of this discussion and the related conclusion must not be underestimated. Which of the two has to be restored: the final static situation or the initial project, even if it is less efficiently resistant?

The talks by Santiago Huerta and Elwin Robison also focused on the static aspects of the Chapel, although from a more theoretical and general point of view. Huerta pointed out some interesting analogies between the structure and Gothic architectural principles.

Although the Chapel of the Holy Shroud is Guarino Guarini's *chef d'œuvre*, it is not his only architectural work. Ugo Quarello presented research on the church of San Lorenzo in Turin, especially focusing on the restoration work undertaken during the eighteenth century. Pietro Totaro spoke about the façade of the church of the Santissima Annunziata dei Teatini in Sicily and its influence on the Sicilian Baroque architecture.

In addition to being an architect, Guarini also was a theologian and a religious (a Theatine), a mathematician and a philosopher. His literary works are particularly

impressive. His treatises include works on philosophy (*Placita philosophica*, 1665); mathematics (*Euclides adauctus et methodicus mathematicaeque universalis*, 1671); architecture (*Modo di misurare le fabbriche*, 1674; *Trattato di fortificazione che hora usa in Fiandra, Francia et Italia*, 1676, and *Disegni d'architettura civile ed ecclesiastica*, 1686); cosmology (*Compendio della sfera celeste*, 1675; *Leges temporum et planetarum*, 1678; *Coelestis mathematicae*, 1683). Some of the scientific treatises were presented and discussed during the symposium: *Coelestis mathematicae* (presented by Patricia Radelet-de Grave) and *Euclides adauctus et methodicus mathematicaeque* (presented by Clara Silvia Roero and Anastasia Cavagna and Michele Maoret).

But Guarini's major essay related to architecture remains the *Disegni d'architettura civile ed ecclesiastica*, a foremost treatise in the specialized international literature of the seventeenth century, illustrated by Joël Sakarovitch, who pointed out how Guarini mastered the techniques of projective geometry, and his skills as a draftsman. The nexus between drawing and design (between "project" and "projection") was addressed by Michele Sbacchi. The delicate question of the reciprocal influence between design and representation is a recurrent discussion topic in Nexus conferences and workshops. Asserting that the plan drawings by Guarini are clear orthogonal projections of the spatial geometry above, Sbacchi adds a further contribution to this debate. The participants at the symposium were able to see some of the original drawings by Guarini and other contemporary architects, which belong to Turin's Archivio di Stato.

James McQuillan and Vasileios Ntovros each presented an interpretation of the symbolic aspects of the architecture and its geometrical pattern, but while McQuillan preferred to link his research to the historical and cultural context of the Baroque period and to Guarini's own writings, Ntovros based his own investigation on the concept of "folding and unfolding" inspired from Gilles Deleuze's definition in the book *FOLD, Leibniz and the Baroque* (University of Minnesota Press, 1992). No contradiction arose from the results of the two analyses, showing how scientific research may be supported either by traditional methodologies or by modern approaches to produce convincing evidence. The rigour of the research alone guarantees its scientific value.

The two-day Turin symposium was not supposed to have any influence whatsoever on the future orientation of the restoration project of the Chapel of the Holy Shroud, but the quality of the works that were presented – and of the discussions that followed – surely contributed some valuable information to the *cantiere della conoscenza* about the Chapel and its designer.

The symposium was made possible by contributions from the Associazione Subalpina Mathesis, Torino, Comune di Vigliano Biellese, the Department of Mathematics of the University of Turin, the Assessorato alla Cultura della Regione Piemonte, and Kim Williams Books. Publication of the *Proceedings* is planned for 2007.

About the reviewer

Sylvie Duvernoy is the Book Review Editor of the *Nexus Network Journal*.