

Building on the page - Building on the site.

Christopher Wren's Italian sources

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The historical and cultural setting

Starting from the 15th century, the influence of Italian culture on Britain grows and affects the society in various fields: court life, books, artistic and architectural tastes, and so on. It is in this period that the “Journey to Italy”, a tradition already established in the medieval time, is enriched with new meanings and aims. Between the 17th and the 18th centuries, the tradition of the Grand Tour will be established precisely out of this experience.

In this context Inigo Jones (1573-1652) is of particular interest. He was one of the first Englishmen to study architecture in Italy, making a least two visits to that country. The architecture by Andrea Palladio had a great influence on him and gave him inspiration for his projects (both architectural ones and in the field of stage design).

Because of the Civil war and the consequent political situation, Jones didn't have the chance to build very much. It was to be Christopher Wren (1632–1723) who introduced with greater efficacy, the new Italian building style to England. His success resulted, in part, from his appointment as Surveyor of the King's works after the great fire in 1666. He never traveled to Italy but is known to have studied Italian sources and publications.

What is that is traveling? Form *and* Technique

Until now, critical study has examined the aesthetic and formal aspects of these phenomena – focusing on the propagation of architectural forms. Much less studied is the transfer of scientific and tacit / technological-constructive knowledge needed to actually *build* each particular architectural form. From the many aspects of the building process, the focus here will be on roof constructions, which constitute a less frequently modernised and also an *a posteriori* easily recognisable portion of a building. The research methodology combines several methods: from the direct analysis and documentation of the material evidence in the buildings themselves (the ‘building archaeology’ approach) to the in-depth study of the written sources, both primary and secondary.

In the paper the analogies between the Italian structures and those designed by Jones and Wren will be analyzed in detail. Particular focus will be on technical ‘facts’: the use of composite rafters (the inclined beams composing the roof-triangle) and the possible origin of this technique; the junctions used in order to produce extremely long tie-beams (the horizontal beam at the “base” of the roof-triangle, in particularly large buildings -e.g. the Sheldonian Theatre- built as the composition of several pieces); the particular form adopted for the shape of the king post (the vertical element supporting the apex of the roof-triangle).

Vehicles for travelling

The introduction of the building techniques connected with the so called “Palladian” architecture to Britain by Jones and Wren in the 17th century is taken as an example of the transmission of facts about construction, largely through written or drawn “description” in books. The paper will analyse in detail the diffusion of Italian architectural treatises in England and particularly the work by Sebastiano Serlio (1475 – c. 1554), who in his seventh book, presents quite detailed instructions and pictures concerning carpentry.

More generally, the relationship between the structures illustrated in the treatises of the time and those actually built will be analysed. Relevant to this research question is also the use made by Jones of the many architectural books he acquired and used as course books or travel guides during his journeys, evident through the detailed technical annotations he made in their margins.

Through this we come to think about another possible vehicle for the travelling of “technical” facts: the architects, craftsmen and educated noblemen travelling through Europe and annotating what they see, at times in a very detailed, technical way.

The paper will analyse also Wren’s journey to France and try to clarify which ‘Facts’ he could have taken with him when going back to London and contributing so significantly to the reconstruction of the city after the fire.

Travelling through “science” and travelling through “experience”: Architects and craftsmen between the study of the written sources and tacit knowledge

The paper will also address the question of the relationship between the intellectual work of the English architects importing (and partly adapting) designs that had been

used in other countries, and the tacit knowledge element provided by the carpenters. There can be no doubt that on the English side, changes were made to the adopted techniques in order to adapt them to local needs. In particular, the carpenters were probably in charge of solving detail-problems (such as junctions and so on), and they will have achieved these solutions using pre-existing skills and techniques.

Research done in this field shows that the introduction of the new building techniques to England was due to the efforts of the architect and not –as one would imagine– the carpenters. But the evidence collected in buildings designed by Wren will be taken to show the influence of the local carpenters' specific skills and technical knowledge on the imported Italian exemplars. In particular, the focus will be on the assemblage methods and the carpentry marks.

CONCLUSIONS

In contrast to the standard literature that focuses on the travelling from Italy of architectural styles, this paper will argue that travelling facts about structures and technical solutions were at least as important to the way their buildings were designed and built. In fact Jones and Wren were influenced by Italian sources both in the general structural forms and the specific technical solutions. Differences in the organisation of the working process, related to the tacit knowledge of the carpenters, will be underlined

Christopher Wren, designer, astronomer, and the greatest English architect of his time. Wren designed 53 London churches, including St. Paul's Cathedral, as well as many secular buildings of note. He was a founder of the Royal Society, and his scientific work was highly regarded by Isaac Newton and Blaise Pascal. The city was now being rebuilt at a considerable pace. Wren himself had nothing to do with the general process. He did give occasional advice to the City authorities on their major projects but designed no houses or City companies' halls. He was the king's surveyor operating from Whitehall, not an official of the City of London.