

Restoration of Gothic Wooden Ceilings

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Abstract The church of Vallibona (Castellon, Spain) was built between the 13th and 14th centuries, with ashlar pointed arches supporting a wooden polychromatic ceiling and the gable tiled roof. At the end of 17th century, the church was converted into a Baroque temple, building a decorated barrel-vault inside the existing temple concealing the gothic wooden ceiling behind it. Moreover, at the beginning of 20th century, a new big chapel was added laterally to the North elevating the gable end of the church to cover the new whole. This involved dismantling the wooden ceiling of the northern gable and re-assembling it anyhow in disorder as an extension of the historical southern gable. This paper presents the detailed preliminary survey made on the wooden ceiling, the different options considered for the restoration and the first phase of repair already done that unveiled its original assembly system and the building site organization.

Keywords Gothic, timber, ceiling, wood, restoration, polychromatic

1. THE VILLAGE AND ITS CHURCH

The village of Vallibona (Castellón, Spain) is placed among the mountains that enclose the river Cérvol, some 600 meters above the sea level. The parish church of the Virgen de la Asunción comes out in the middle of the village, surrounded by adjacent or close vernacular housing in its East, North and West façades. It is an architectural whole of great historic and artistic value (Burns 1993). In the beginning it was formed by a single nave with five sectors with four ashlar pointed arches supporting a wooden polychromatic ceiling and a tiled roof. This church from the end of 13th and the beginning of 14th centuries has two entrances at the South and West façades. The ceiling was formed by two gables and a central horizontal section of exceptional quality, that could be compared with any of the well-known polychromatic wooden ceilings remaining nowadays in Spain (Civera 1989; Novella 1981).

The dimension of the church and the quality of its wooden ceiling allow us to imagine the economic importance of Vallibona in Medieval times, mainly derived from the wool production. The expert Arturo Zaragoza relates the decorative and heraldic motives with the queen's income coming from the neighbor Morella (Zaragoza 2004). It may be possible that a noble, the same city of Morella, the king or some bishop have collaborated or directly financed the building of the temple. After the first period, the original and simple wall-belfry built at the head of the church was substituted by a tower belfry built with brickwork in precious Mudejar style completely surrounded by vernacular housing.

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Figure 1 – The village of Vallibona with the parish church of the Virgen de la Asunción

2. TRANSFORMATIONS OF THE CHURCH

This Medieval church survived without any changes emerging from the embracing vernacular housing of the center of the village till the 17th century or maybe the beginning of 18th century when it was completely reformed internally by building a Baroque barrel-vault inside the temple concealing the Gothic wooden ceiling behind it. This Baroque decoration, mostly conserved till today, answers to the typical Valencian church decoration made in gypsum that was common in that time. The Baroque interior conceals the original Gothic building behind it till the point that only the severe Medieval ashlar walls of the outside may reveal that the temple is at all Gothic in origin. The magnificent painted ceiling was forgotten but conserved in the narrow space between the tiled roof and the extrados of the Baroque vaults.



Figure 2 – The interior of the Virgen de la Asunción with the Baroque vaults

At the beginning of the 20th century, some adjacent houses at the northern side of the temple were acquired and demolished to build an enormous Communion Chapel in Neoclassical style parallel and side by side to the existing church. The northern Gothic gable was dismantled and the beautiful painted timber was disorderly re-used to build the extension of the original southern gable assembling it anyhow disregarding the original function and position of the pieces, elevating the gable end of the church to cover the new whole. This re-use was implemented disregarding the painted decoration and

the historic value, trying to save beams and purlins to cover a wider surface and transforming the structural rhythm of the ceiling, turning upside down the painted boards and using the amazing man-shaped corbels as tie-beams for the new pillars and creating a new wooden intermediate floor upon the Baroque vaults made of recycled painted elements to walk on. Finished the timber from the gothic northern gable reused in the extension of the historical southern gable, it was then necessary to build the new northern gable with new timber in the form of wooden logs and wickerwork between them as a base for the upper tiles. The generated space under the new tiled roof has big dimensions derived from the elevation of the gable end.

Ultimately, during the Spanish Civil War, the altar of the temple was burnt but the rest of the temple remained untouched. After that, the interior of the church was roughly repaired several times but almost everybody forgot about the existence of the wooden painted ceiling, till we were called to make the preliminary study and the restoration project.

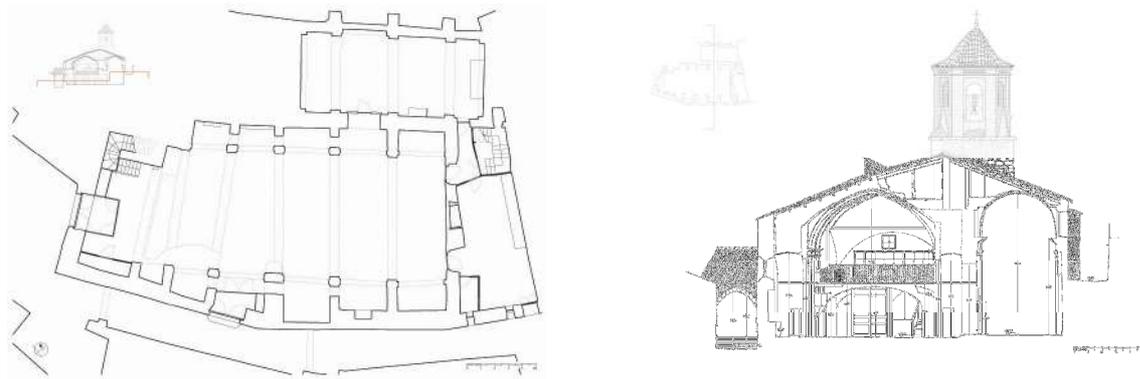


Figure 3 – The plan and the cross section of the church of the Virgen de la Asunción

3. THE RESTORATION PROJECT

First of all, a very detailed survey has been made based upon orthophotography, that has helped to define the exact dimensions of the wooden pieces, its assembly, constructive details, painted decoration and current damages. Nearly 3.000 photographs have been taken of every painted face of each piece forming the Gothic wooden ceiling. All these photos have been afterwards graphically rectified in order to create metrical orthophotos to be inserted in the architectural survey. Hundreds of plans have been developed this way, forming a unique architectural, constructive and decorative documentation of the whole wooden ceiling and its current state, that present many leaks that are not only washing away the coloured paintings and exposing the wood to insects and fungus attacks, but also affecting very seriously the Baroque vault built with flat vaults bonded with gypsum and with a very complex decoration made of gypsum.

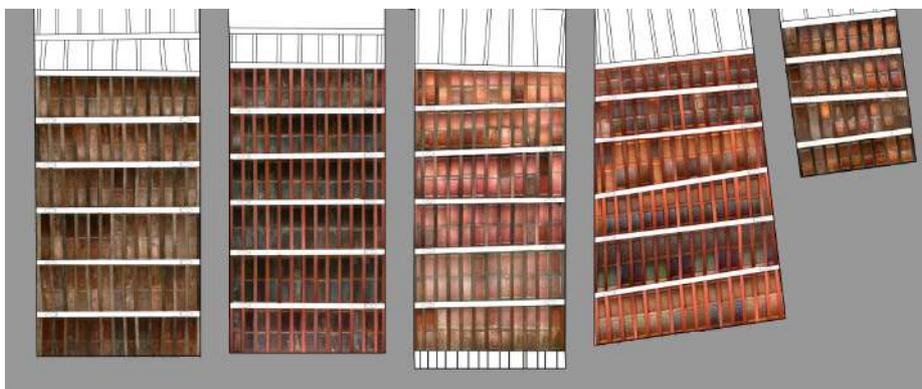


Figure 4 – The orthophotography of the Gothic wooden ceiling of the church

The restoration project has been thought in order to be able to restore and put into value the Gothic ceiling without demolishing or even affecting the Baroque vaults that give the current main character to the church, allowing the usual visit of the church and the direct and near observation of the Gothic coloured ceiling in the space between the extrados of the Baroque vault and the roof gables. The project has considered and evaluated three possibilities. The first one consisted in leaving the relocated wooden pieces of the former northern gable in its current disordered position at the extension of the southern gable, favouring the documental value of this disorder, as this situation also forms part of the history. On the other hand, taking into account its accidental placement, the second considered option was to try to re-assemble it in a better ordered disposition, similar to the original one in Medieval times. The third option considered the restoration of the southern gable ceiling in situ and the dismantling of the former northern gable ceiling in order to restore it and relocate it hanged under the wooden ceiling as part of a permanent exhibition of the history of the building itself (Vegas 2008).

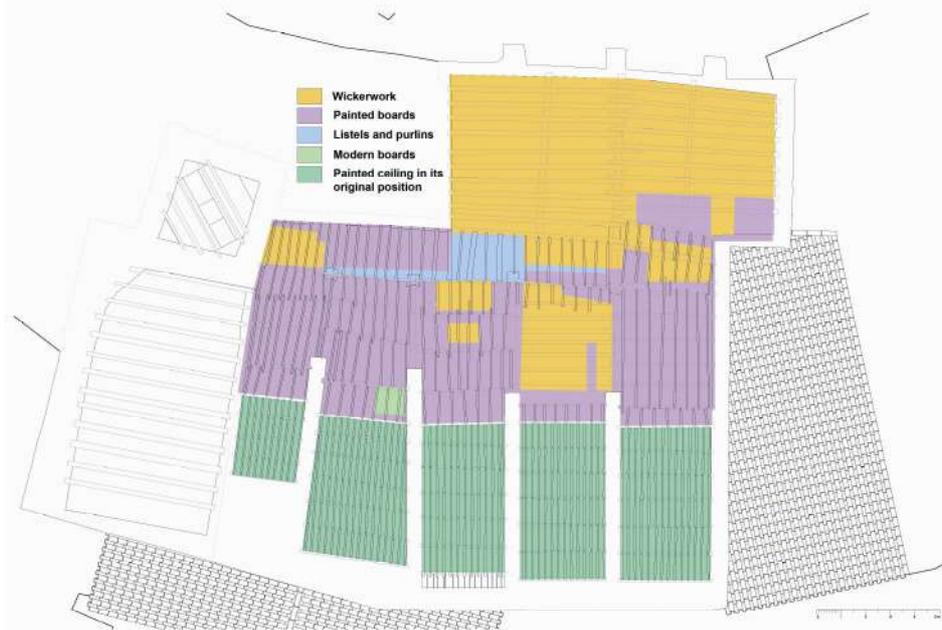


Figure 5 – The plan of the different types of ceiling of the church

Being objective, we could argue against the first option, i.e. leaving the relocated wooden pieces from the former northern gable in their present chaotic disorder, that many of them are upside down in touch with the tiles mortar or form part of the improvised floor under the roof, in both cases seriously jeopardizing the paintings. Being subjective, it is true that on the contrary to the original southern gable that is possible to restore in situ, the disordered relocating of the former northern gable with beams, purlins and boards out of the original rhythm does not help at all to restore them, at least, what regards the paintings. Dismantling the roof in order to have access to these pieces, restoring them and relocating them in their hazardous ubication or even upside down in touch with the tiles mortar, would be an absurd.

The second option of relocating the former northern gable in its Medieval original situation would have caused serious problems of draining for the roofs because of the existence of the new chapel, would have cancelled the generous space under the roof and would have made it difficult for the visitor to observe the interior. The reconstruction of the whole northern original gable *com'era dov'era* with these pieces would have been anyway difficult, because most of the special pieces of the central more preciously decorated part had been pillaged. Ultimately, the alternative option of incorporating constructively the former northern gable as an ordered extension of the original southern gable would have been very expensive and difficult to manage. In fact, given the disorder of the pieces, this approach would have meant the restoration of the whole ceiling in just one turn, forcing to build an auxiliary roof while finishing the restoration, classification and reordering long processes.

With all these arguments in hand, it was decided the third option, i.e. to tackle an in situ restoration of the original southern gable, dismount the relocated and disordered former northern gable to restore it in workshops and expose it afterwards. Before proceeding to repair the tiled roof, it was necessary to previously consolidate the paintings, because many of them were risking to peel off.

Thus the process for each ceiling sector would be following: consolidation of paintings from the interior in order to avoid losing them with the help of Japanese paper if necessary; dismantling of the tiles and piling them for reuse; eliminating the mortar and/or other layers till arriving to the extrados of the painted wooden boards; carefully dismantling of the wooden ceiling in the former northern gable nowadays placed in disorder as an extension of the southern gable numbering and classificating all the painted elements in order to be restored in workshops; building of new beams, purlins and listels following the existing constructive logics and rhythm in the original southern gable; treating all the wooden ceiling against insects and fungus; creating a ventilated and thermally isolated chamber on the wooden ceiling extrados and a second layer of phenolic boards sealed in their joints for improved waterproofing; putting again the original tiles; and finally, once eliminated all the leaks, restoration of the polychromatic wooden ceiling of the original southern gable in situ.

On the other hand, once restored in workshops, all the recovered pieces of the former northern gable would be remounted constructively in place, hanged at short distance from the new wooden ceiling in order to be exposed for the visitors in the big central space. It would be also possible to organize a perimeter course upon the Baroque vaults in order to be able to observe not only the relocated northern gable from the existing generous space under the roof, but also the southern gable in its original position.



Figure 6 – The cross section of the project of the church of the Virgen de la Asunción

The restoration works in the chamber under the tiled roof and above the Baroque vaults have required some previous work in order to guarantee the security of the workers. The intermediate wooden floor built with recycled painted elements in the beginning of the 20th century was deeply rotted and had been responsible for several small accidents and falls, fortunately without serious consequences. Lacking of enough financing to recover the pieces, a provisory reinforcement with phenolic boards was disposed to guarantee safe walk for architects, technicians, restorers and bricklayers. Besides, the accumulation of powder and dirtiness over the last three centuries over the Baroque vaults needed an urgent cleaning with an industrial vacuum-cleaner to allow breathing normally in the chamber.

According to the available finances, a first phase of repair has been executed in the fourth and fifth sections, as described (Vegas 2005). The access to the tiled roof was made through a vent on the southern gable at the fourth section that was causing the entrance of water inside. For this reason, this vent has been cancelled and the new access and ventilation occurs through the terrace of the adjacent abbey house. The ventilation of the ventilated chamber takes place through openings under the eaves and special ventilation tiles at the height of the gable end.

While dismantling the tiled roof in the fourth and fifth sections, a historical protection layer of 8 cm of earth for the Gothic ceiling was uncovered, as well as other details of its original assembly system, building site organization, painting system and artisans... For example, wood was cut with a hand saw and then sanded only on the exposed surfaces and the ordered position of the purlins was indicated with little incisions made at the edges of the upper surfaces. These and other signs in the painted decoration, such as the colors and motives used, the bas-reliefs belonging exclusively to the central part of the ceiling according the tradition to help building a three-dimensional view and the painters' different hands allow us to essay a future logical and reasoned re-assembling of the former northern and central part for its exhibition (Vegas 2009).

CONCLUSIONS

The study and restoration project made for the wooden painted ceiling of the parish church of Vallibona have been aimed to put into value its historic and artistic significance, as a Medieval polychromatic ceiling of exceptional quality concealed behind a Baroque vault has been unveiled. For the first time, the detailed study developed has been able to register and diffuse all the painted elements that conform the ceiling. Nevertheless, this study has also considered the importance of the Baroque vault with its fine gypsum decoration as it creates the present Baroque atmosphere of the interior of the church. Thus, the restoration project proposes the need of preserving both phases of the church, each one with its peculiar historic and artistic values, trying to search for the compatibility between their conservation and the possibility of enjoying both of them.

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