Mosaic and Trencadís in the Palau De La Música Catalana
Cristina Martí Robledo a

a Restauracions POLICROMIA SL, Catalonia

Abstract
Modernism has provided Catalonia with buildings of great artistic value, such as the Palau de la Música Catalana located in the heart of Barcelona. Its architect, Lluís Domènech i Montaner, approached ornamentation as a thorough integration of arts and crafts: ceramic is treated as the ‘key’ element, decorating the entire building while coating and protecting its internal metallic structure at the same time.

During Modernisme, the classic mosaic technique, based on the use of small tiles (or tesserae) made of ceramics or glass paste, incorporated a new method called trencadís (A procedure carried out using irregular pieces of tiles fragmented randomly and put together in an abstract way).

Keywords: Modernisme; Lluís Domènech i Montaner; Conservation; Restauracion.

Article History:
Received: 20 March 2018
Accepted: 01 May 2018

1- Introduction
In the heart of Barcelona's old town (Ciutat Vella) lies the emblematic Palau de la Música, a building from the Modernista era, which was declared a BCIN (Heritage Site of National Interest) in 1971 and UNESCO World Heritage Site in 1997. (Figure 1). It is located on the junction of the streets Sant Pere més Alt, Amadeus Vives and Sant Francesc de Paula, where there once stood a Convent with the same name, and which in 1992 was knocked down. Its architect, Lluís Domènech i Montaner was one of a series of great names that the Modernista era produced. Among his many architectonic creations, the Hospital de la Santa Creu i Sant Pau in Barcelona or the Institut Pere Mata in Reus stand out. Many historians believe that the Palau de La Música Catalana is the synthesis of his constructive work even though it was not understood at the time. He began designing the project in 1904 and it was built between 1905 and 1908.

2- El Palau De La Música Catalana
Modernisme was a movement that sought to create a new style as a way of rejecting the academic historicism of the 19th century based on asymmetric and sinuous lines recreating plant like forms. In Catalonia, there was clearly a new artistic conception driven by an ornamental programme based on its total integration into the arts. This idea created what we call today "interdisciplinary groups", since Lluís Domènech i Montaner as an architect worked with artists from different areas: stonemasons, blacksmiths or mosaicists such as Pau Gargallo (1881-1934), Mario Maraglino (1864-1944), Lluís Bru (1968-1952) or Eusebi Arnau (1863-1933), among others. This understanding in their work also reinforced another distinctive idea of the movement, the use of materials that in those days were considered low quality in creating great works of art.

In this way, materials such as exposed brick, ceramic, glass or iron gained importance. The Palau follows this trend, but despite this, what we now consider to be an architectural masterpiece, at the time was considered too pompous and ornamentally overloaded to the point where it was nicknamed, according to Lluís Permanyer (Permanyer, 2008), the "Trinket Palace" (Quincalla = trinkets) and was ordered publicly to be knocked down.

*CONTACT: Cris.marti@policromia.es
DOI: http://dx.doi.org/10.28991/esj-2018-01134
© This is an open access article under the CC-BY license (https://creativecommons.org/licenses/by/4.0/).
In terms of materials, ceramic was one of the most popular elements in the Valencian tradition and Modernisme enhanced it in Barcelona. It acquired added value thanks to its hygienic qualities and its use as a functional, economical and aesthetic medium. It became so popular that the Pujol and Bausis company (The Pujol i Bausis factory was the most important one in the production of ceramics during the second half of the 20th century, coinciding with the Modernista movement, which benefited from its creations.), a leader in research on modern ceramics according to Pià Subias (Subias, 2003) upgraded pieces in different formats designed by many of the architects at the time like Domènech i Montaner and Puig i Cadafalch. In the case of the Palau de la Música Catalana, ceramic covers almost all the corners of the building. It can be found either evenly, in moulds or raised as tile or mosaic cladding, playing with shapes and composition. For this reason, it is a clear example of the different ways you can see mosaic. A possible answer to the question posed at the conference "what is a mosaic?", could be found in the entirety of this building that houses mosaics of different shapes, materials and colours. The conventional shapes of small format tesserae lie next to those cut following a pattern, or those large-scale made to measure ones following a specific drawing next to those broken randomly that are called trencadís, which I will describe below. Mosaics were made either of ceramic or glass like the partitions in the concert hall or the Sala Lluís Millet. The variety of colours and play with tones provide the volume and effect of movement in the dresses of the muses on the concert hall stage.

Both the exterior and interior of the Palau de la Música Catalana are a collection of samples of the combination of different compositions of mosaic, but what we find most of is tesserae or relief tiles placed using the trencadís technique. The tesserae mosaic is prevalent everywhere varying from small glazed pieces of only one colour (Figure 2) to decorated ones (Figure 3) as can be found on the bench in the central square in Parc Güell or the pillars of the chimneys in the Puig i Cadafalch house in Argentona.
There are also mosaics made with tiles that have intentionally defined shapes that create the desired composition (Figure 4 and 5). Trencadís is a peculiar and distinctive trait of Modernisme in Catalonia. It is a procedure made using irregular pieces of glazed tiles fragmented randomly and replaced in an abstract form. This type of mosaic became very popular during the Modernisme era and became a characteristic and unique feature. One of the examples that we can find in the Palau is the monochrome background of the stage where 18 muses can be found with their decorations.

3- The Chamber In The Concert Hall

The concert hall in the Palau has a rectangular floor with stalls and two floors, a central skylight on the roof and a stage in the shape of a semi-sphere decorated with the 18 muses at the front, representing different musical arts (Figure 6). This space is an emblematic element of the building and the sculptures are a symbol of an artistic moment. You can reach them from the stalls via the sculpture that surrounds the proscenium, work of Pau Gargallo. Once inside, mosaic is the main theme.
**Figure 4.** Monochrome ceramic pieces, cut in a desired shape forming a mosaic.

**Figure 5.** Tesserae mosaic and tiles in one colour, both smooth and with relief.
Eusebi Arnau created the head, body and arms of the 18 sculptures in stone located on two levels of the semi-sphere. There are nine muses on each side of the national emblem of Catalonia, crowned with the crest of the king of James I the Conqueror, work of Lluís Bru. The dresses and garlands of roses that unite the figures are works by Mario Maragliano and were made using tesserae mosaics on a trencadís monochrome background. The figures are stylised and the flared skirts provide stability to the figures.

The ensemble consists of the following musical representations: Greek cithara, flute, tambourine, pipes, triangle, lyre, castanets, drum, German lyre, psaltery, voice and trumpet, harp, violin, "gen-bri", pan flute, lute, flabiol and tambori and lastly an aulos.

In the article by Marta Saliné (Saliné, 2015) on the instruments and clothing of the sculptures, she describes the relationship between each one clearly: their instrument, the symbolism of where they are located and the era they represent.

The decorative richness of the stage can be perceived in the tesserae mosaic that draws the dresses of the muses and garlands that join them together. It is composed of glazed pieces and pieces of glass paste. The latter can be found only in lilac, black, purple and green. The colours and shapes provide movement and draw each of the sculptures. It is worth mentioning the use of tesserae or of large-sized ceramic pieces to emphasize the folkloric or uninhibited value of what they wanted to transmit. This is true in the case of the muses of the "tambourine", "pipes" and "lyre" whose feet and legs were created using pieces of light-coloured ceramic cut in curved forms to recreate the anatomy. It is interesting to compare the muse of the "lyre" (Figure 7) with the muse of the "voice and trumpet" (Figure 8) due to both their similarities and differences regarding formal and aesthetic features. Although they are both vertical and have a similar body, the first is happy and in movement as we can see her legs through the opening of her skirt. Whereas the second is serious and static, accentuating gravity through the representation of the chain-mail that she wears like a dress with her legs covered by a cuirass. Even the instrument they represent is very different since the muse of the "lyre" carries an instrument related to dancing and movement, whereas the muse of the "voice and trumpet" transmits solemnity with hers. Interestingly, it is worth highlighting Barcelona's emblem which appears inverted on her skirt, a reference to Saint George who is the patron saint of Catalonia.

Figure 6. Final state of the right side of the chamber of the concert hall after the restoration intervention (photo by Josep Blanco).
Figure 7. Muse of the lyre before restoration (photo by Josep Blanco).

Figure 8. Muse of the voice and trumpet before restoration (photo by Josep Blanco).
The mosaics of all the dresses and garlands were probably made in a workshop on nets that allowed them to be transported easily. Once these large-format pieces reached the site, they could combine its placement with the background “trençadís”, with the stone sculptures and the lower finishes of the ceramic tiles which was carried out in situ. During the restoration of the interiors of the Palau, another example of this procedure was found in the decoration of the mosaic with tesserae of the central part of the columns. These were lined with the nets that contained the mosaics and were added to the cylinder using cement to allow for quick drying. You can see the union of the extremes of the pieces due to the irregularity or adjustment between tesserae, which in some points break with the proportions of the drawing.

4- State of Conservation of the Mosaics in the Chamber

We must remember that the Palau de la Música Catalana at the time was not considered an example of art that people liked, nor was it given any of the importance that is has now. This generated a very hostile interest in minimising its decoration and alleged extravagance, which means that the stage in general has been witness to the different actions carried out. A very clear example are the stone sculptures on the stage, which during the building’s opening in 1908 were not painted, unlike how they were found during restoration.

After searching the photo archives of the Historical Archive of the City of Barcelona (Figure 9), concretely of a bibliographical study with the documents provided by the people in charge of the Palau de la Música Catalana (Marta Grassot, head of the Documentation Centre of the Orfeó Català and Raquel Rodríguez, head of guided tours at Palau de la Música Catalana) and the results of the analyses carried out by Patrimoni UB (Heritage - University of Barcelona), we can conclude that there were at least four documented interventions through its history. The intervention dates to 1929 during when the first coat of paint was applied to the muses. In 1948, during the second intervention, a second coat of paint was applied to the stone and a first coat to the mortar joint of the trençadís using alkyd paint which began to be commercialised in the 1930s.

During the third intervention in 1972, occasional paint work was carried out on the stone to create the effect of volume and on the mortar joint of the mosaic, this time using synthetic paint, which was characteristic of the 1960s.

During the fourth intervention in 1995, the last one to be documented, the construction company Natursystem superficially cleaned the stone muses and their instruments. Lastly, in 2007, Policromia carried out the restoration of all the elements on the stage to restore it to its original state under criteria of minimum intervention and maximum respect towards the work (Figure 10).
Thus, the coats of paint applied to the stone and the ceramic conditioned the vision of the decorative ensemble due to the loss of volume, texture and colour. The brown tones were carried out on the stone and according to the tonality of the pieces of mosaic a yellow, red or green paint was applied. Regarding the colour of the mortar joint of the “trençadís”, it was painted in a red tone similar to the tiles, creating a vision of a flat background. From its opening in 1908, the Palau has been used continuously for concerts and cultural acts. This created another problem, the loss of material on the figures due to knocks during the constant coming and going of people and equipment of a certain height. Also, the amount of adhesive tape used for cables found stuck to the ceramic gave it a dirty aspect. The loss of mortar joint of the ceramic or damage caused by knocks, holes and fixings can also be added to this long list. All of this shows the lack of preservation over the years.

5- Restoration Intervention

The criteria followed for the restoration of the decorative ensemble on the stage of the Palau de la Música Catalana was using as many reversible products as possible and a minimal intervention, prioritising conservation and maximum respect towards the work.

Based on this premise, together with the Construction Management team (The Construction Management team was made up of the architects Òscar Tusquets i Esther Villanueva, Carles Díaz as Coordinator and Susanna Pavón as Technical Architect) in charge of supervising the building renovation, we decided to remove a layer of paint from the entire stone and ceramic surface area and recover the original look of the ensemble.

The restoration was carried out during the month of August, coinciding with the work being carried out in the stalls and this way avoiding being closed to the public during a long period of time (The Company ARCOVALENO collaborated on the restoration work carried out by Restauracions POLICROMIA). The work started with the mechanical removal of added elements such as wooden studs, nails and pieces of plastic as well as mortars and cement from subsequent restorations.

Once this phase was finished, we carried out prior tests supported by the analyses carried out by Patrimoni UB to decide on the most suitable methodology and products for each material and remove the entire layer of paint using a distinct cleaning process on the stone and ceramic. In the case of the tiles, tesserae mosaic and “trençadís”, we cleaned the superficial grease and dirt using neutral soap and then rinsed with distilled water.

The residues incrusted in the surface area were removed using soft nylon brushes. A scalpel was used in the most difficult of cases as well as for the paint used to repaint the mortar joints that had also covered part of the glazed perimeter of the dresses and garlands. Adhesive tape was removed by softening it with ethanol first and then using a scalpel.

Next, fragments of mosaic that could potentially fall were consolidated using epoxy resin and later acrylic resin was used to fix the glazed elements that had been damaged.
Subsequently, the mortar joints that had been repaired using cement that covered parts of the tesserae or "trençadís" fragments, were cleaned up mechanically.

Finally, mortar was used to ensure the stability of the pieces and to close the holes made by the fixings. This process was carried out using lime mortar and a mixture of sand and gravel in different colours to match it to the general tone of the mortar (Figure 6).

10- Conclusion

The mosaics and "trençadís" discovered at the Palau de la Música Catalana are a great work of art and a modernist gem. Their restoration has been a work of conservation after retrieving the original work. Preservation is needed in any heritage building in order to safeguard its continuity and in this way, appreciate its historical and artistic value. We must conserve heritage to avoid its degradation and therefore ensure minimum intervention.

12- References