

Manazir مناظر Journal

Journal of the Swiss Platform for the Study of Visual Arts,
Architecture and Heritage in the MENA Region

Issue 3
2021

Geometry and Color. Decoding the Arts of Islam in the West from the Mid-19th to the Early 20th Century

**edited by Sandra Gianfreda, Francine Giese,
Axel Langer and Ariane Varela Braga**

Impressum

Manazir Journal is a peer-reviewed academic Platinum Open Access journal dedicated to visual arts, architecture and cultural heritage in the Middle East and North Africa (MENA). Created in 2019, the journal is linked to *Manazir – Swiss Platform for the Study of Visual Arts, Architecture and Heritage in the MENA Region*, a platform of exchange that aims to connect researchers interested in these themes. The term “Manazir” refers to landscapes, perspectives and points of view in Arabic, Ottoman Turkish and Persian. Thus, *Manazir Journal* is oriented towards a diversity of transcultural and transdisciplinary “landscapes” and “points of views” and open to a multiplicity of themes, epochs and geographical areas.

BOP - Bern Open Publishing

ISSN: 2673-4354

DOI: <https://doi.org/10.36950/manazir.2021.3.9>

Creative Commons Attribution License (CC BY 4.0)

© Manazir 2022

Manazir
مناظر

Swiss Platform for the Study of Visual Arts,
Architecture and Heritage in the MENA Region

u^b

UNIVERSITÄT
BERN
Philosophisch-historische Fakultät
Institut für Kunstgeschichte
Center for Global Studies



UNIVERSITÉ
DE GENÈVE
FACULTÉ DES LETTRES
Unité d'arabe

Production, design & layout: Joan Grandjean

Copy editing: Hannah Jung

Cover image: “Moresque Ornament from the Alhambra”
in: Owen Jones, *The Grammar of Ornament*, London 1856,
pl. XLIII (detail).

This issue was made possible with the support of the
Rietberg-Gesellschaft.

Editors-in-Chief

Silvia Naef
University of Geneva

Nadia Radwan
University of Bern

Issue Editor

Laura Hindelang
University of Bern

Editorial Team

Joan Grandjean
University of Geneva

Laura Hindelang
University of Bern

Riccardo Legena
University of Bern

Advisory Board

Leïla EL-Wakil
University of Geneva

Francine Giese
Vitrocentre, Vitromusée,
Romont

Kornelia Imesch-Oechslin
University of Lausanne

Béatrice Joyeux-Prunel
University of Geneva

Bernd Nicolai
University of Bern

Mirko Novak
University of Bern

Estelle Sohier
University of Geneva

Mireia Freixa & Marta Saliné¹

The Starting Point of the Arabic-Andalusi Influence in Gaudí's Ornamental Ceramic

The Pavilions Güell (1884-1887)

Abstract

Between 1884 and 1887, Antoni Gaudí built two rather modest constructions for his patron, Eusebi Güell: a stable for the horses and a porterhouse for his country house in Les Corts. In these constructions, he makes an important step in relation to his previous works, *El Capricho* (Comillas, Santander) and the Casa Vicenç (Barcelona). The tiles used in both, featuring lines of color that contrast with the brick and stone, derive from an original system of using ceramic, the *trencadís*. He takes as a reference point the Arabic or Mudejar building system to embed ceramic pieces in the walls and in the coronation railings of the buildings, but adds a brilliant contribution by converting it into "broken" ceramics. We call this ornamental resource *trencadís*, since *trencar* means broken in Catalan. This technique is one of Gaudí's more significant decorative choices with brilliant examples of this being the façade of Casa Batlló and the dragon and banc-balustrade in Park Güell.

Keywords: Antoni Gaudí; Trencadís; ceramic mosaic; Catalan *Modernisme*

The *trencadís* ceramic and Gaudí

The *trencadís* mosaic is one of the images that best identifies the architecture of Antoni Gaudí (1852-1926). It is one of his more significant decorative choices, with brilliant examples such as the façade of Casa Batlló and the dragon and banc-balustrade in Park Güell (fig. 1). Thanks to the proper use of ornamentation, architecture represented the synthesis of all the arts, creating a rich combination of shapes, volumes, textures, and colors. Gaudí followed the decorative styles practiced by architects of eclectic taste, who justified ornamentation by considering it to be the element that gave architecture character and style.

¹ **Mireia Freixa**, emeritus professor, Universitat de Barcelona.
Email: mireia.freixa@ub.edu
Marta Saliné i Perich, independent art historian and curator.
Email: msaline@gmail.com



Figure 1: Antoni Gaudí and Josep Ma. Jujol. *Banc-balustrade from the Park Güell*. 1911-1914. Image courtesy of Triangle Books, photographed by Pere Vivas.

Gaudí experimented with ceramic material replacing the popular look of traditional mosaic tiles with fragments resulting from irregular cutting. The cutting “breaks up” (“trenca” in Catalan) the tiles into fragments—hence the name *trencadís*. A large number of artisans, industrialists and bricklayers emerged around Gaudí, with the architect Josep M. Jujol (1879-1949) outstanding among them. They all shared creative wealth and a love for recycling materials. The durability of ceramics makes them the ideal medium for the application of color to architecture.

We can provide some answers that justify the great success of *trencadís* during the *Modernisme* (the Catalan Art Nouveau). Firstly, the local tradition of covering walls with colored tiles: a hygienic and cost-effective resource that had been used in Catalonia and Valencia since the Middle Ages. But we should also mention the fact that the architects, designers, and manufacturers were perfectly in tune and created top-quality designs that were mass-produced for an enthusiastic public.

The context in which this research is carried out is our interest in the Güell Pavilions (1884-1887), the gatehouses to the summer home of his patron Eusebi Güell, that are now integrated into the campus of the Universitat de Barcelona (fig. 2). The World Monuments Fund included this work in its 2014 Watch List with the aim of collaborating in its restoration and knowledge. From this moment on, the contacts with this institution have been constant to the point that it has sponsored, in 2018, the edition of a book *Gaudí and the Trencadís Mosaic* (Freixa and Saliné) and an exhibition at the Museu Nacional de Ceràmica i de les Arts Sumptuàries González Martí de Valencia from October 2020 to January 2021.



Figure 2: Antoni Gaudí. *Güell Pavilions*. 1884-1887. Image courtesy of Triangle Books, photographed by Pere Vivas.

Antoni Gaudí: The architect of color

In his early works—Casa Vicens and El Capricho (both between 1883-1885), the Güell Pavilions, and his main residence, Palau Güell (1886-1889)—the architect combines the use of historic styles with elements of great decorative originality using hitherto unseen building techniques. By the early twentieth century, he had built a series of houses, which showcased the abstract and organic forms of the Art Nouveau movement, as seen in the Casa Calvet (1898-1900), the Casa Batlló (1905-1906) and the Casa Milà-Segimon (1905-1911), also known as *La Pedrera*. In the Park Güell (1900-1914), he designed a beautiful urban park for the most affluent members of Barcelona's bourgeoisie. Finally, the church at the Colònia Güell (1898-1915) was approached as a small-scale trial run for what was to become his masterpiece, the Sagrada Família (from 1883). From 1914, Gaudí devoted himself solely to the Sagrada Família till his death.²

Likewise, Gaudí understands that beauty can be found in the color that emerges simply from imitating natural forms: "Ornamentation has been, is and will be colored; nature doesn't give us any monotonously uniform objects. Everything in the plant and animal kingdom, geology, and topography, the colour contrast is more or less vivid, and this means we have to colour part or all of an architectural feature. This colour may disappear but the passage of time will ensure it has its own beautiful colour of antiquity" (Gaudí 46). *Trencadís* created the desired variations of tone that stemmed from imitating nature and the refraction of light also lends a sense of movement. Even when the color is less perceptible, in the evening or on dull days, light is captured and reflected, as if the glazed ceramic simulated shards of mirror. Another major contribution was the creation of textures stemming from the contrast between materials.

² Among the large bibliography on Gaudí and the applied arts see *Gaudí. Art and Design*; Martínez; Bracons et al.

Mosaic and its offshoot, *trencadís*: The art of fragmenting to create an undivided whole

The art of mosaic in *Modernisme* was truly unique and incomparable in relation to European mosaics created in the series of styles epitomized by Art nouveau. It is a compendium of ancient techniques that could be applied to modern architecture. Gaudí used all the types of mosaic available at the time: Roman, Venetian and ceramic. But the ceramic one is the most representative type and gave rise to its offshoot *trencadís* (fig. 3). It is important to point out, however, that, initially, the most common mosaics were Roman ones for flooring, Venetian mosaics for covering walls, but, in the end, ceramic mosaics took precedence over the Venetian ones because they gave the same results as Italian glass and were much cheaper.

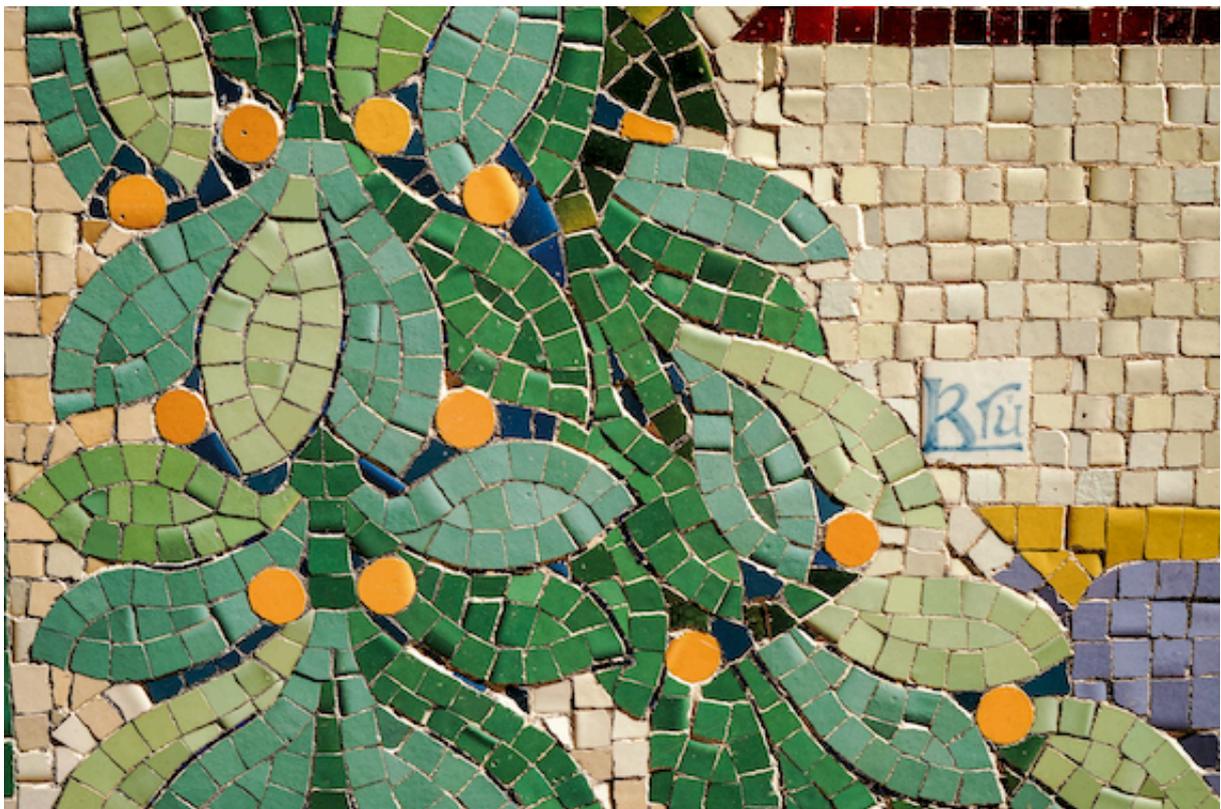


Figure 3: Lluís Bru. Ceramic mosaic from *Antiga Farmàcia Viladot*. 1905. Image courtesy of Triangle Books, photographed by Ricard Pla.

For its part, *trencadís* differs from ceramic mosaics for a purely technical reason: the way the pieces are cut. This means we refer to ceramic mosaics when the tesserae are cut into regular shapes and sizes, a technique that required a mosaicist's knowledge and skill. However, *trencadís*, which was irregular in shape, didn't require a professional's skill or knowledge. Nevertheless, we must accept that the frontier between one technique and the other is often hard to define. It must be recognized that *trencadís*, as part of the mosaic family, was considered a minor technique and this means that the name does not feature in any advertising of the period. The mosaicist Lluís Bru called it "mosaico irregular," as can be seen among his papers.³

There were countless ways of cutting ceramics and many mosaicists invented their own tools and systems to make them easier to cut. The slowest method involved scoring the glazed side of the

³ C.31, V 12. AMEL Arxiu del Museu d'Esplugues de Llobregat (Barcelona).

tile with a glass cutter and then breaking it with a hammer and chisel and polishing the edges. The fastest system, used in *trencadís*, involved breaking the tile at random by hitting the unglazed side with a plant pot. Although this method of cutting was fast and the pieces could be applied easily, the production technique was really “low tech” as the pieces all had to be cut and put in place methodically by hand. We are reminded of the anecdote related by Lluís Bru when Gaudí broke a tile with a plant pot and threw the pieces onto the counter exclaiming: “by the handful, they have to be used by the handful, otherwise we’ll never be finished!” (Saliné 163). Although this method of cutting was fast and the pieces could be applied easily, the production technique was really “low tech” as the pieces all had to be cut and put in place methodically by hand.

Once the pieces had been shaped, there were two ways of creating the motif on top of the surface. The direct method, which was the system used in antiquity, consisted of applying the tesserae one by one onto wet cement following a design on paper. The indirect method was the most frequently used method in Italy and was adopted by the mosaicists in the vast workshops at the Vatican in the Renaissance and baroque eras. The mosaic pieces were stuck on to a life-size drawing on paper. Once the glue had dried, the paper with the tesserae attached was applied to the wall onto a layer of cement (a current comparison would be a sheet of modern mosaic bathroom tiles). When the cement had dried, water was applied to the paper, which was peeled off to reveal the mosaic. The joints were then filled in with grout.

Classical influence and Arabic models

The Roman mosaic technique used as flooring was reintroduced to Catalonia in the late nineteenth century by Italian mosaicists as a logical consequence of the development of neo-Gothic architecture in the building of churches (Voccoli). Religious fervor at the time went hand in hand with the idealized Gothic style and the search for new patterns in liturgical art. The furniture, vestments, gold-, and silverware, and, of course, mosaics, were the perfect companion pieces. In the 1880s, beautiful mosaic floors began to be used in newly built churches. Luigi Pellerin (dates unknown) was the first Italian master mosaicist based in Catalonia. He was responsible for the floors in the church of the Salesas (1884), designed by Joan Martorell, Gaudí’s master. However, Catalan mosaicists considered Mario Maragliano Navone (1864-1944) to be the true maestro. Maragliano hailed from a long dynasty of Genoese mosaicists and had settled in Barcelona in 1884.

Gaudí wasn’t directly involved in the project for the church of the Saleses, but he designed the mosaic floor—made between 1879 and 1881 by Luigi Pellerin—for the church of Sant Pacià, in Sant Andreu del Palomar (Bassegoda Nonell 155-157), and the floor of the crypt of the Sagrada Família (ca. 1883), also made by Luigi Pellerin.⁴ Both are large-scale projects, as one would expect of such important commissions.

But the *modernistes*, and Gaudí in particular, were particularly knowledgeable about the Hispano-Arabic mosaic technique. The beauty of its geometric shapes astonished architects and industrialists who used a great freedom of composition to achieve a milestone in the art of mosaic. Gaudí’s main source of inspiration was the tiling *alicatados* from the Hispano-Arabic tradition, the tiles that used to cover the walls of buildings. They consisted of small regular or irregular ceramic pieces arranged in a decorative pattern to achieve a broad color palette giving a wonderful contrast between textures and colors.

Like other architects of his generation who had been trained in the Eclectic tradition, Gaudí was well versed in Moorish decorative techniques. In a notebook from his youth, he lists the plates

⁴ There are doubts about whether the current floor is the same one or the result of a restoration carried out after the Spanish Civil War. In this case, it was made or restored by Mario Maragliano (Saliné 169).

featuring Arabic and Moorish architecture in the collection of photographs published by Laurent y Cia (fig. 4), that he had consulted at the School of Architecture library (Gaudí 117-120). He would also have seen pictures in color in the books of chromolithographs, including M. A. Racinet's famous work, *L'Ornement polychrome* (pl. XXIX), and the studies of the Alhambra from Jules Goury and Owen Jones (45), both documented in Barcelona libraries.

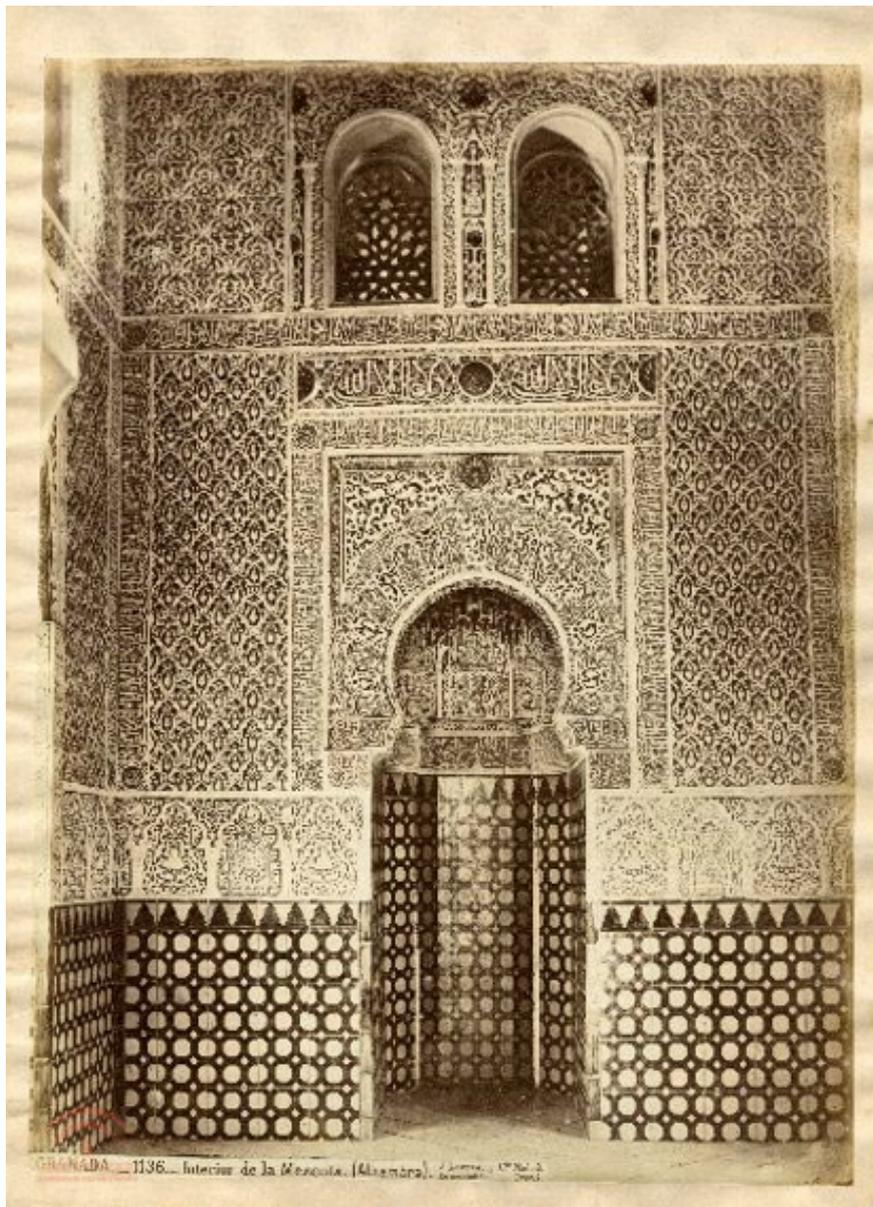


Figure 4: Jean Laurent. *Granada 1136. Interior de la Mezquita (Alhambra)*. 1871, Albumin copy sepia toned, 33.5 x 25 cm, F-05192. Image courtesy of Archivo del Patronato de la Alhambra y Generalife (APAG)/Colección de Fotografías: <https://www.alhambra-patronato.es/ria/handle/10514/10363>.

Likewise, in his student years, his interest prompted him to visit the studios of one of the last craftsmen versed in the ancestral secrets of glazed ceramics, Joan Baptista Cassany Folgado, who was based in Manises on the outskirts of Valencia. The trip, which Gaudí undertook in 1887 with the architect Lluís Domènech i Montaner (1850-1923), is described by the latter in 1903, in an article written to mark the untimely death of his colleague, the architect Antoni M. Gallissà (1861-1903; Domènech i Montaner 3-4; Casanova 156-157, 166).

But we argue that his most direct models were the tiled panels on the floor of the main cloister at Poblet Monastery (fig. 5). Gaudí may have visited it in his student days as a result of his friendship with Josep Ribera i Sans, a fellow student at the school in Reus who became a prestigious professor in Madrid. Ribera's father was a teacher in L'Espluga de Francolí, a town near Reus and Poblet (Fort i Cogul 10-11).

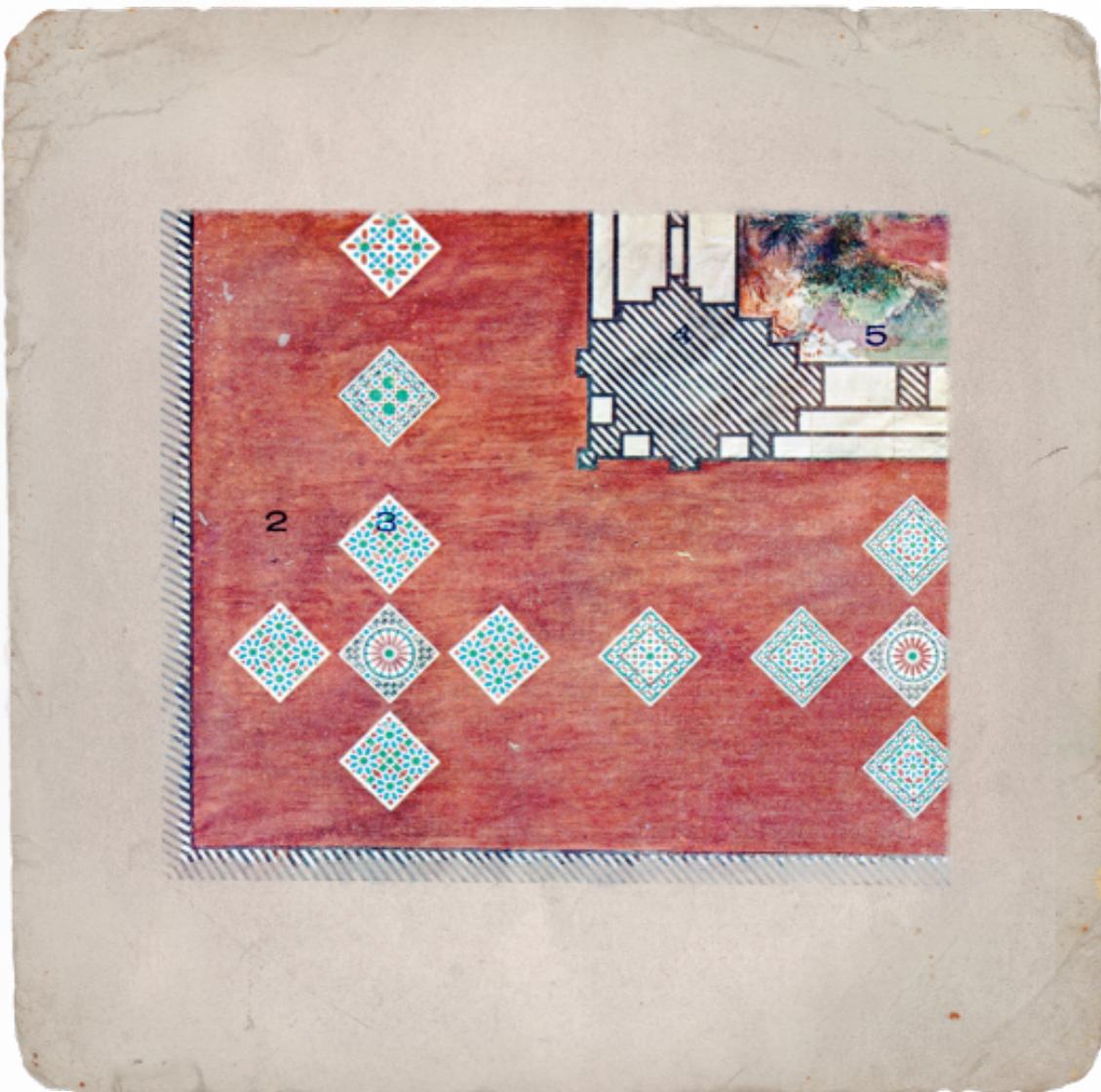


Figure 5: Cloister's pavement drawing of the Monastir de Poblet.

Image courtesy of the Museo Nacional de Cerámica y Artes Suntuarias González Martí.

The old pavement dated from the late fifteenth century and was still in situ at the time (González Martí 119-128; vol. III). They were in such a poor state of repair that they were replaced by the flooring we see today, but some original examples remain at several museums. The panels were set into a base of brick tile and were the work of groups of itinerant Arabic artisans who worked on commissions (Altisent 248-249). The earliest reference to these panels is by Rodrigo Amador de los Ríos y Villalta (1849-1917) and date from 1915, although he discovered some of them in Tarragona: "certain very curious framings of tiles that have lost their colour and primitive glaze and can be found on the floor of the main cloisters" and after he saw still some samples there (Amador de los Ríos 174). In 1835, the monks were exclaustated, the monastery abandoned and plundered. It was not until 1930 that the restoration works began, so we can deduce that Gaudí could still have seen remains of the pavement.

Another possible contact with Arab culture would date from 1891, when Gaudí was commissioned to carry out a Franciscan mission project in Tangier, promoted by Claudio López, the brother-in-law of his patron Eusebi Güell and by his wife, María Luisa Andrés, but which was never built. He made a splendid design that he had hanging in his workshop in the Sagrada Família (Ràfols and Folguera i Grassi 85, 267). There has been speculation about whether he made a trip to North Africa, but this has not been proven (Torii 32; Nasser 27-35). However, this would have been after to the Güell Pavilion's project, the work that according to us is crucial in defining the *trencadís* technique.

Beyond the knowledge of Hispano-Arab art, Gaudí was also very familiar with Mudejar architecture—the art made by Muslims in territories located under the Kingdoms of Aragon and Castile. The use of embedding small ceramic fragments into the brick façades characterizes Mudejar architecture: a beautiful application, usually playing between white and green. The description of the Mudejar as a style proper to the Hispanic lands, was a recurring theme in nineteenth-century Spanish historiography (Rodríguez Domingo 1999). There are no Mudejar samples in Catalonia, but they were being rediscovered and studied at the time and Gaudí must have known it.

The Güell's summer home and garden

In 1859, Eusebi Güell's father, Joan Güell, had purchased a property in Les Corts (now a borough of Barcelona) and had it totally refurbished by his architect, Joan Martorell, Gaudí's master. The renovations undertaken by Eusebi after he had inherited the estate included a new drive providing faster access from the newly laid out Sarrià road and he commissioned Gaudí to design a new gate and gatehouses. The estate was reached along a private path flanked by twin rows of trees that passed a series of properties and led to the dragon gate. The entrance to the estate was set back from the street so that passers-by would not notice it. This may go some way to explaining the unusual appearance of these buildings.

The wrought-iron gate in the form of a dragon is the best-known and most iconic feature of the Güell gatehouses. It connects two small buildings that had different functions, two very humble constructions—the gatekeeper's house and the stables—but decisive to understanding the passage from the Mudejar language to the free and absolutely original use of ceramic *trencadís*. The porter's lod: the stalls for the horses and a second space designed to be used as a lunging ring, covered by dome with a lantern.

The exterior: Color, ceramics, and *trencadís*

In the Güell Pavilions, Gaudí used for the first time the *trencadís*. It is the "magic moment," in which ceramic began to be applied in a different and innovative way.

Until then his façades were ordered, like a grid, with colored tiles placed directly onto the wall surface. The decoration was obtained directly from these tiles which were manufactured on purpose and featured specific decorative motifs: carnations painted using a stencil at the Casa Vicens or sunflowers in relief in the case of El Capricho. The Güell gatehouses mark a break with this strict aesthetic using new resources. Gaudí put into practice his ideas about multicolored architecture by highlighting the contrast between exposed brick and the color of the ceramics—following Mudéjar models—and also introducing *trencadis*, and using low-cost, and even recycled, materials. This change in approach marks a shift from an "ornate" architecture to more practical building techniques using simpler materials.

The walls of the stables and porter's lodge are capped with a brick balustrade in the form of interlocking equilateral triangles (fig. 6). Small ceramic pieces have been embedded into their apexes forming a central point, lending the composition a great sense of color and order that evokes the Mudéjar decorative technique and geometry. The small pieces have been cut by a diamond wheel to ensure a clean cut and creating straight, well-finished edges. Moreover, on both sides of the dragon gate—the brick pillar that supports the huge grille and a small entrance for pedestrians—we can see the new resources Gaudí used to apply the ceramic shards (fig. 7). The joints between the bricks are colored in a unique way by embedding small pieces of ceramic into soft cement using the direct method. The aim is to imbue the entire structure with color, even the simplest element of all, cement.

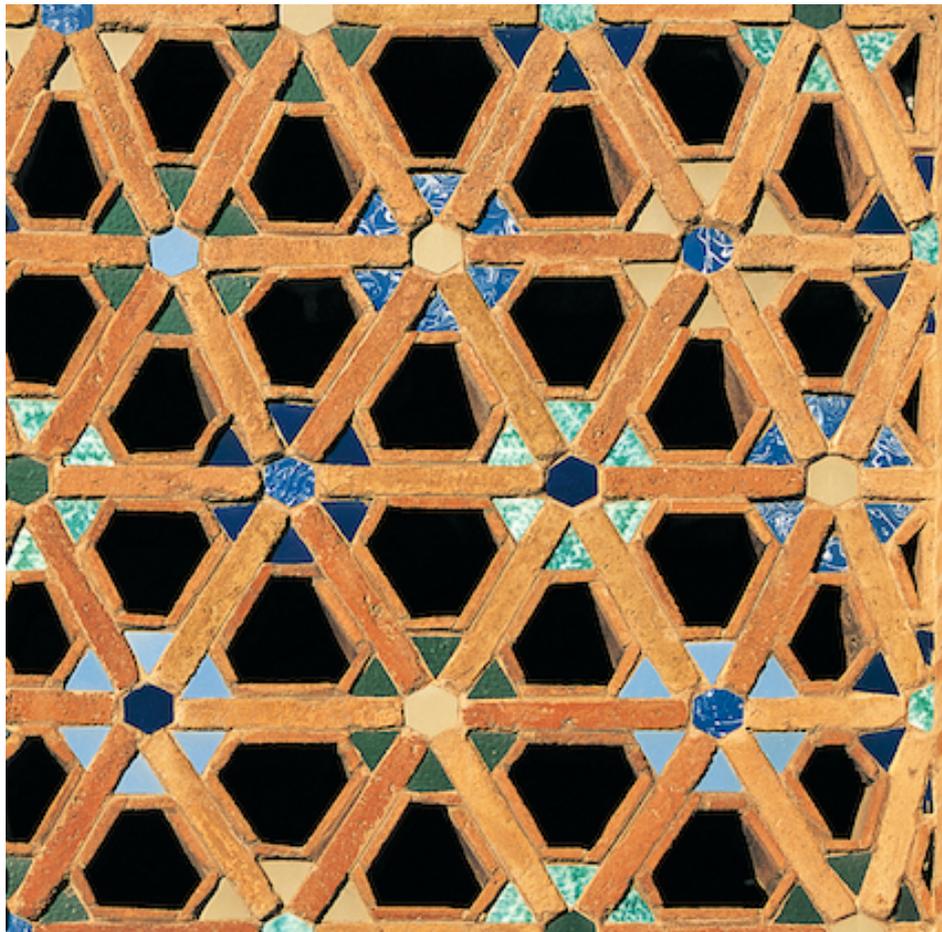


Figure 6: Antoni Gaudí. *Güell Pavilions*: Balustrade made according to the Mudéjar technique. Image courtesy of Triangle Books, photographed by Pere Vivas.



Figure 7: Antoni Gaudí. Güell Pavilions: Pillar with small pieces of ceramic embedded into soft cement. Image courtesy of Triangle Books, photographed by Pere Vivas.

And Gaudí takes a step further in the decoration of the dome over the lunging ring and the three ventilation chimneys—and to a lesser extent in the air-circulation vent—in the porter's lodge, where *trencadís* is much in evidence. The tile fragments are monochrome and, in some cases, interspersed with splashes of color, known as *fregalls*; named so, because the pigment was applied directly onto the tile with a wet Esparto grass scourer, "*fregall*" in Catalan, or marbling, an effect that imitated top-quality marble with veins created by mixing watered-down pigments (fig. 8). These three types of tiles were made at potteries that manufactured everyday materials, such as ceramic skirting, and tiles for kitchens, bathrooms, and toilets. These tiles measured 13 x 13 cm or 15 x 15 cm. A new size, measuring 20 x 20 cm, became popular later and was based on the decimal system introduced by the Valencian potteries.

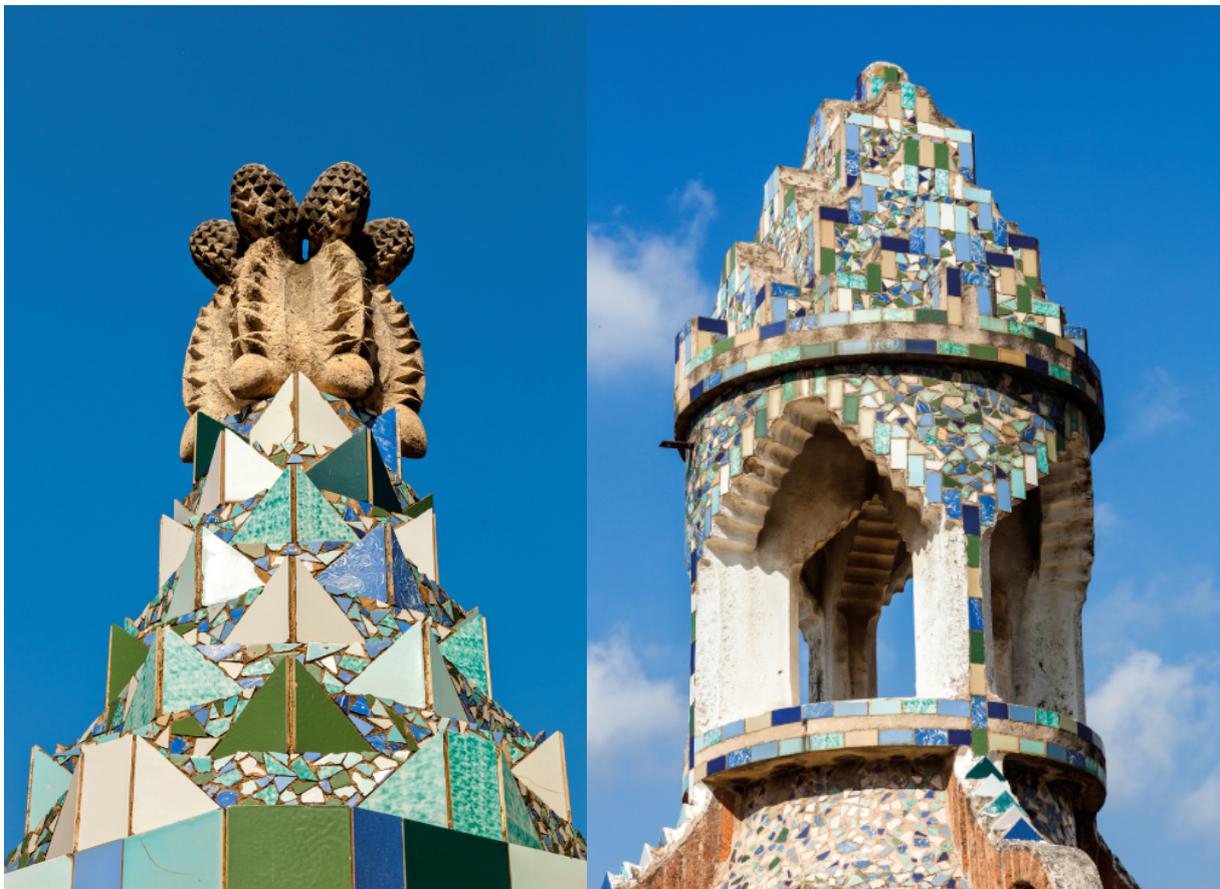


Figure 8 and 9: Antoni Gaudí. *Güell Pavilions: Ventilation chimney*. Images courtesy of Triangle Books, photographed by Pere Vivas.

It is highly likely that the uptake in the use of these tiles was the result of their lower cost and different available sizes and reflected a change in the tastes of the time. The jambs of the lantern windows in the dome above the lunging ring are clad in tiles of different shades of green, while the dome itself features triangular motifs filled in with rectangular or triangular mosaics. However, we can conclude that there is always a dominant regular, ordered geometrical pattern. The monochrome, *fregall*, or marbled rectangular and triangular pieces on the ventilation chimneys in the porter's lodge also define the forms and the small shards fill in the gaps (fig. 9).

The Güell gatehouses represent a change of direction in Gaudí's concept of decoration. He moves beyond the Arabic and Moorish technique of embedding walls and banister finials with ceramic pieces, to come up with an ingenious solution in the ventilation chimneys and the dome above the lunging ring: breaking tiles into shards and creating *trencadis* mosaics.

Conclusion

Fragmented ceramics have become an identifying element of Gaudí's work. The historical itinerary of this architectural "skin" began in the Les Corts Pavilions, where pottery was used in fragments for the first time. From these roofs to the final construction, the Sagrada Família (1926; fig. 10) the *trencadis* was transformed by incorporating different materials that were either unusual or made from recycled rubble. This became the color of the undulating forms in Gaudí's architecture.



Figure 10: Antoni Gaudí. *Bell towers from the Sagrada Família*. Image courtesy of Triangle Books, photographed by Ricard Pla.

Bibliography

Altisent, Agustí. *Història de Poblet*. Abadia de Poblet, 1974.

Amador de los Ríos, Rodrigo. "Reliquias de los Musulmanes en Cataluña." *Revista de Archivos, Bibliotecas y Museos*, no. 9-12, pp. 73-212.

Bassegoda Nonell, Joan. *El Gran Gaudí*. AUSA, 1989.

Casanova, Rossend. "Lluís Domènech i Montaner, a la recerca de la ceràmica moderna." *Millars. Espai i Història*, vol. 25, 2002, pp. 155-173. <http://www.e-revistes.uji.es/index.php/millars/article/view/3145/2579>. Accessed October 2021.

Domènech i Montaner, Lluís. "Antoni Ma. Gallissà en l'intimitat." *La Veu de Catalunya*, no. 1556, 21.5.1903, pp. 3-4.

Fort i Cogul, Eufemià. *Gaudí i la restauració de Poblet*. Rafael Dalmau, 1976.

Freixa, Mireia, editor. *Modernisme. Art, tallers, indústries*. Viena Edicions, 2015. Catalogue of the eponymous exhibition, 8 Oct. 2015 - 7 Feb. 2016, Fundació Catalunya La Pedrera, Barcelona.

Freixa, Mireia and Marta Saliné. *Gaudí and the trencadís mosaic*. Triangle Postals, 2018.

Gaudí, Antoni. *Escritos y documentos*. Edited by Laura Mercader. El Acantilado, 2002.

Giralt-Miracle, Daniel, editor. *Gaudí. Art and Design*. Fundacio Caixa Catalunya, 2002. Catalogue of the eponymous exhibition, 17 Jun. - 24 Sept. 2002, Fundacio Caixa Catalunya, Barcelona.

González Martí, Manuel. *Cerámica del Levante español, siglos medievales. Alicatados y azulejos*. Labor, 1952. 3 vols.

Goury, Jules and Owen Jones. *Plans, Elevations, Sections and Details of the Alhambra*. Owen Jones, 1836-1845.

Nasser, Mustafa Akalay. "Gaudí el Tangerino. Un proyecto inédito: las misiones franciscanas de Marruecos." *Aldaba*, vol. 16, 1991, pp. 27-35.

Racinet, M. A. *L'Ornement polychrome. Cent planches en couleurs or et argent*. Librairie de Firmin-Didot et Cie, ca. 1880-1889.

Ràfols, Josep-Francesc and Francesc Folguera i Grassi. *Gaudí 1928*. Escola Tècnica Superior d'Arquitectura, 2011.

Rodríguez Domingo, José Manuel. "Neomudéjar versus neomusulmán: definición y concepto del medievalismo islámico en España." *Espacio, Tiempo y Forma, Serie VII, Hª del Arte*, vol. 12, 1999, pp. 265-285.

Saliné, Marta. *El mosaic modernista a Catalunya (1888-1929). De la mà de Lluís Brú i Salelles i l'obra de Lluís Domènech i Montaner*. 2015. Universitat de Barcelona, PhD dissertation.

Torii, Tokutoshi. *El mundo enigmático de Gaudí*. Instituto de España, 1983.

Vélez, Pilar et al., editors. *Modernisme: Toward the Design Culture*. Ajuntament de Barcelona, 2020. Catalogue of the eponymous permanent exhibition, Museu del Disseny de Barcelona.

Voccoli, Ottrovina. *La rinascita dell'arte musiva in epoca moderna in Europa. La tradizione del mosaico in Italia, in Spagna e in Inghilterra*. 2009. Universitat de Barcelona. <http://diposit.ub.edu/dspace/handle/2445/35607>. Accessed October 2021.

Biography

Mireia Freixa is Emeritus Professor at the Department of Art History at the University of Barcelona and member of GRACMON, Research Group of Catalan Art and Design Contemporary (<http://www.ub.edu/gracmon/>). She is also member of the Reial Acadèmia Catalana de Belles Arts de Sant Jordi. Her research topics are the artistic production of Catalan *Modernisme*—the Catalan Art Nouveau—, especially with regard to the history of architecture and the applied and decorative arts, the study of the sources of history of art, and the review of the discipline from a gender perspective.

Marta Saliné i Perich presented her PhD, *El mosaic Modernista a Catalunya de 1888 a 1929* in 2015. She is an expert in ceramic art applied to the construction during the Modernista period. She has worked in different professional fields such as research, education, heritage conservation of museums and archives. Between 2001 and 2015, she was the curator of the Museu de Ceràmica d'Esplugues de Llobregat and now she is an independent scholar and collaborator of GRACMON UB.
