

Article

A Skin to Live in: Geometric Parietal Paintings in the Residential Architecture of al-Andalus

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Abstract: Andalusí residential architecture is often described through planimetry or its internal constructive materiality. However, the real architectural vision of those who inhabited or visited Andalusí palaces or houses was completed by an important decorative epidermis that covered the structural materials and gave these Islamic buildings their final visual impact. Traditionally, the three-dimensional stone and plaster ornamentation has been the most analysed; the pictorial decoration that widely covered plinths has rarely been studied as a whole, despite the numerous remnants documented in recent decades. In this work, we propose a holistic and synthetic approach to this decorative architectural element, from its technical elaboration to its role in the three-dimensionality of Andalusí residential spaces. We also address its influences and its aesthetic evolution over the centuries.

Keywords: Islamic; medieval; decoration; coatings; design; houses; palaces

1. Introduction

Andalusian residential architecture, especially that from the 10th century, has been widely studied in recent decades. Historiography has traditionally focused on a specific model of patio-house that appears among the humblest dwellings to the great palaces, with specific features that vary by time, place, and the status of the inhabitants. These studies generally address the plan of this architecture, analysing structures' dimensions, area, materials, or construction techniques; however, the buildings' final appearance, what the occupants of such spaces inhabited, is generally omitted. The final construction material of these buildings was a genuinely protective layer that visually covered the base structure. It was composed of various materials (stone, plaster, lime, or wood) in which complex epigraphic, geometric, vegetal, or figurative ornamental schemes were depicted.

Carved stone was abundantly used during the 10th century, as the large marble and limestone panels with geometric and vegetal motifs that covered the buildings at Madīnat al-Zahrā' reveal (Vallejo Triano 1995). With the fall of the Umayyad dynasty and the progressive abandonment of the quarries (León Muñoz 2008, p. 72), the decorative use of carved stone seems to diminish or disappear. Plasterwork then acquired more prominence and exuberantly covers many Andalusí buildings, appearing in courtly and religious spaces (cf. Navarro Palazón 1998; Huarte Cambra 2001) as well as more modest domestic spaces (Navarro Palazón and Jiménez Castillo 1995b, 2007). These materials have been extensively studied, but a significant research gap remains regarding a material that must have been crucial in the creation of the structural "epidermis" of domestic architecture: wood. Beyond doors and roofs, it must have been prominently utilised in Andalusí and North African residential architecture; its use has been verified for support elements, such as capitals, bases, and shafts (cf. Pavón Maldonado 1999, p. 629). Because wood deteriorates rapidly, it appears infrequently in excavations, unlike stone or plaster, which have been identified in important buildings (Gomes 2003, pp. 57–58) and more modest ones (Navarro Palazón and Jiménez Castillo 1995b; Macías 2005, vol. 2, p. 388). Many Andalusian cities must



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have had masters of the art of inlay, such as late-Islamic Córdoba (cf. Bloom et al. 2013; Martínez Enamorado 2003, pp. 101, 124). The extensive exploitation of the forests of Córdoba that was still practised in the 15th century, as well as the great variety of woods used, particularly walnut, beech, and pine, could derive from an intense tradition of woodworking since Islamic times. After the Christian conquest, the use of wood in palaces and houses was abundant (Córdoba de la Llave 1990, pp. 275–84). Many testimonies of decorative woodworking in the Christian late medieval period have been preserved, extending beyond structural uses or the typical Andalusí ceilings in the Mudejar (Díez Jorge 2001, p. 159) and some Muslim buildings from the 13th century onwards, such as the al-Sahrij Madrasa in Fez and the Alhambra in Granada (Pavón Maldonado 1967). Extensive wooden reliefs must also have covered the walls of Andalusí residential structures, which would later be finished with a chromatic coating made by specialised painters, like that used on the plasterwork (cf. Navarro Palazón and Jiménez Castillo 1995b, p. 132). In late medieval Christian ordinances, a distinction is made for “wood and fresco painters, differentiating them from image makers, gilders and of canvas” (Díez Jorge 2001, p. 161). The technique would be like the painting known as “Moorish” style (cf. Ruiz Souza 2021, pp. 288–90), with two phases: the first involving two “emprimaduras” (primers) and the second, the colours—sometimes with gold—which were then varnished (Córdoba de la Llave 1990, p. 333).

Finally, lime played a fundamental role in decorating houses. It was the superficial layer that covered the house, both inside and out. Outside, the colour white predominated in Andalusí towns and persists in many traditional parts of Andalusia. Al-Šaqundī highlighted this characteristic in the towns of Seville’s Aljarafe in the 12th century: “they appear, from their whitewashed surfaces, like white stars in a sky of olive trees” (Al-Šaqundī 1976, p. 121). Quicklime obtained by burning limestone in kilns was quenched with water before being used to plaster exterior walls. It would also be mixed with sand to create mortar and tinted with reddish iron oxide (almagra) to finish floors and walls in domestic interiors (Figure 1). For such uses, it would be mixed with straw (García Bueno and Medina Flórez 2001, p. 135), a common technique seen in Roman frescoes to minimise cracking after drying (Rallo Gruss 2003, pp. 114–22).



Figure 1. Layers of lime mortar tinted with almagra in Late-Islamic Córdoba: (a) Antonio Maura Street (Castillo Pérez de Siles 2003); (b) Palacio de Orive (Murillo et al. 1992).

In 15th-century Córdoba, quicklime was widely used and, according to Christian documentation, various lime kilns near the city supplied it. Shortly after the Christian conquest, at least two types of lime were marketed: white (normal) and “prieto” (dark) lime (Córdoba de la Llave 1990, pp. 307–8). Of the latter, we only know that it was made with “arrayán stone”. This Spanish word comes from the Arabic “rayḥān”, which means a shrub

of the Myrtaceae family that has been widely used since ancient times for its therapeutic properties (Mimica-Dukić et al. 2010, pp. 2760–61). Perhaps the stone was fired with myrtle leaves or oils to make the resulting lime antiseptic. In addition, and not excluding the previous hypothesis, “prieto” could refer to a blackish chromaticism frequently used in Moorish painting alongside almagra, “acofaira” (ochre) and vermilion (Rallo Gruss 2003, p. 134). It may have been used in Islamic interior painting to darken lime mortar and obtain an antiseptic “dirty white”—a hygienic property that the almagra would also have.

2. Pictorial Technique in the Plinths of Andalusí Residential Architecture

The interior pictorial coating has been used in residential architecture since antiquity, and its development within the Andalusí world would not have been alien to the Iberian late-antique tradition, nor possible influences from the East. Medina and Bueno find a closer connection with oriental Umayyad frescoes than with the Hispano-Roman tradition in the Andalusí technique (García Bueno and Medina Flórez 2002). However, due to the lack of knowledge about the parietal paintings of residential architecture before the Islamic conquest, and the early history of al-Andalus, it is presently impossible to know precisely which tradition exerted the greatest influence. In any case, unlike in the Roman world, the Andalusian decorative design was less figurative, and it was centred on the plinths as it was adapted to some customs and furniture that lowered occupants’ visual horizons (Torres Balbás 1942; Rallo Gruss 2003, p. 116; Serrano-Niza 2019).

The preparatory lines for geometric motifs could be made with painted or incised cord lines on fresh mortar that were traced with the aid of a compass, bevels, and ruler (Cánovas et al. 2007, p. 492; Rallo Gruss 2003, p. 124). In many cases, the original pattern does not seem to have been followed exactly (Figure 2), perhaps due to the speed with which frescoes must be executed before they dry (Rallo Gruss 2003, p. 132) or because the guidelines were understood as orientational. The frescoes have an especially finely textured polish, perhaps from reinforcing the pigment with Arabic gum and lime water (García Bueno and Medina Flórez 2001, p. 137). In the ordinances for painters of Córdoba of 1493, we can see some interesting technical aspects of “Moorish painting” (González Jiménez et al. 2016), which should not be substantially different from painters’ pre-conquest methods (cf. Landa Bravo 1979; Ruiz Souza 2021, pp. 288–90):

“en quanto a la pyntura de los alyceres que se pyntan al fresco, se guarde lo siguiente: Primeramente ordenamos e mandamos que por quanto en esta pintura non puede aber engaño, porque se pynta con colores muy baxas como acofaira e almagra e prieto e porque éstas resciben la cal en sy templadas con agua e aluayalde para esta obra facer de cal, porque sta tal permanece; e seyendo desto otro morir e tornarse a negro, e en lugar de bermellón se pone azarcón; pero sy algund azul fyno o verde cardenillo ovyeren de poner, primero dexten secar la cal e verde aroly e lo azul que lo den con su templa de huebos”¹. (González Jiménez et al. 2016, p. 265)

The difficulty, speed, and skill that these complex fresco designs required would entail specialised professionals, whose work, usually carried out without templates and adapted to each job (Rallo Gruss 2003, pp. 130–31), would be expensive and highly valued. Some workshops would command more than others, depending on the quality of the designs and the types of buildings that housed them. The presence of parietal paintings is a clear indication of the occupants’ purchasing power as these decorations rarely appear in the poorest houses, and if they do so, they are of low quality and not very thick. Thicker frescoes offer greater resistance and durability, but they also require more lime and, therefore, are more costly. Typically, one-layer wall coverings are about 2–3 cm thick in the humblest dwellings up to around 10 cm thick in the most important buildings, such as those documented in Madīnat al-Zahrā’ (Rallo Gruss 2003, p. 124). Likewise, good symmetry in the composition, the realisation of well-defined lines, and homogeneous colouration with a consistent, clear layout are only identified in the most important places. Judging by the examples collected, the execution could have been performed by workshops

of different specialities or, perhaps, by craftsmen with different experience or abilities within the same workshop. In both cases, lower quality could imply a lower cost for the owner.

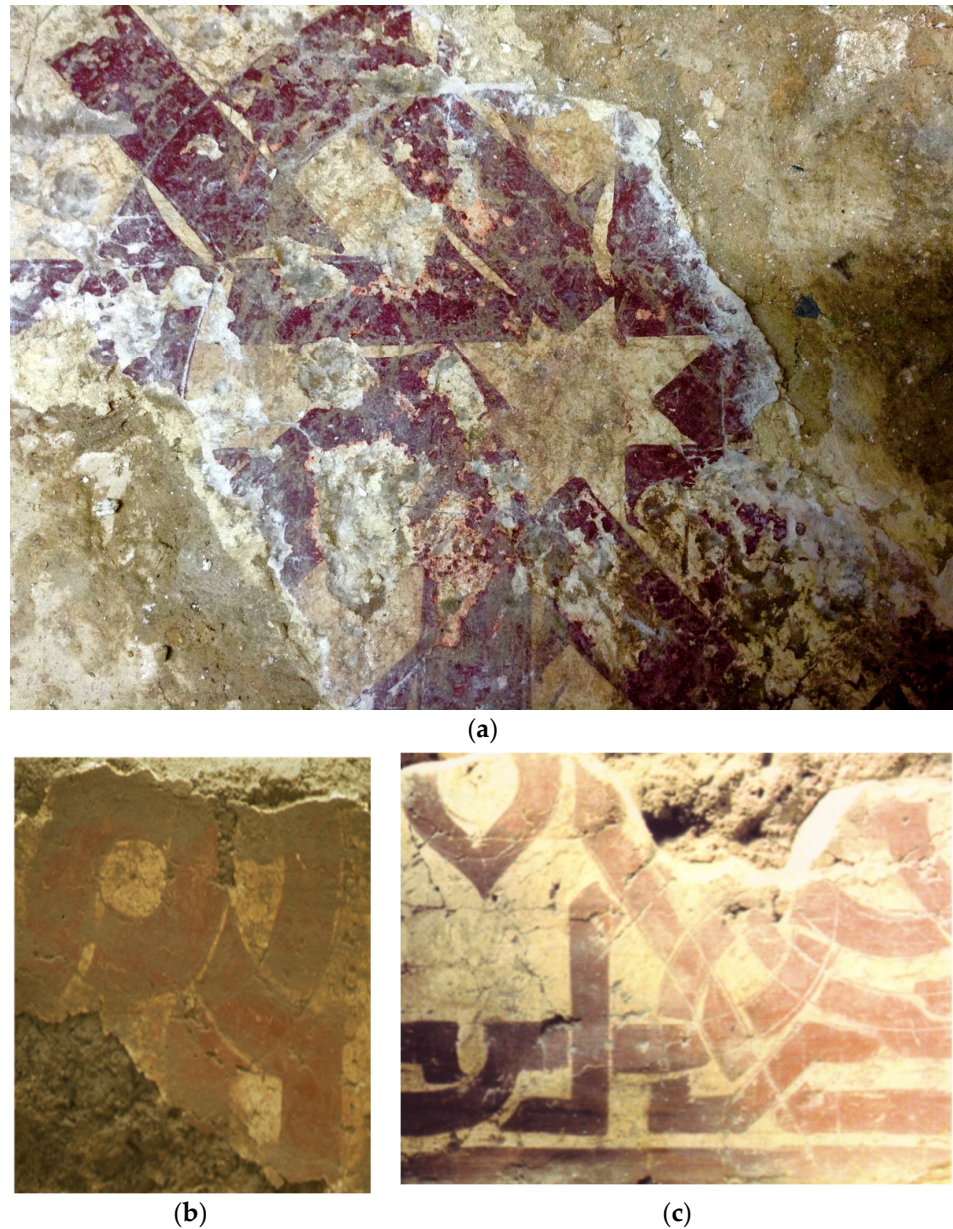


Figure 2. Traces of fresco techniques in the 12th century: (a) Plaza de San Pedro, Huelva (Miguel Ángel López in [Díaz 2018](#); [Admin 2018](#)); (b) Antonio Maura Street, Córdoba ([Moreno Rosa 2004](#)); (c) Palacio de Orive, Córdoba ([Murillo et al. 1992](#)).

In some of the most important residences, there are thicker, double-layered coatings. The first layer is an undecorated and well-smoothed base, sometimes with ceramic fragments and tiles incorporated between it and the stone, brick or mud wall (Figure 3b). This technique had been used since Roman times as insulation to protect the fresco from the humidity of the wall ([Rallo Gruss 2003](#), p. 115). The second, final layer held the pictorial decoration and was applied over the first layer. For better adhesion, the latter would be embedded in the base through grooves in the form of dots, diagonal lines or a zigzag pattern that would leave positive marks on the inner surface of the final layer. We see this in houses in Córdoba (Figure 3a,c), Málaga ([Salado Escaño and Arancibia Román 2003](#), p. 80), Saltés ([Bazzana and Delaigue 2009](#), p. 185), and Seville ([Valor Piechotta 2008](#), p. 108).

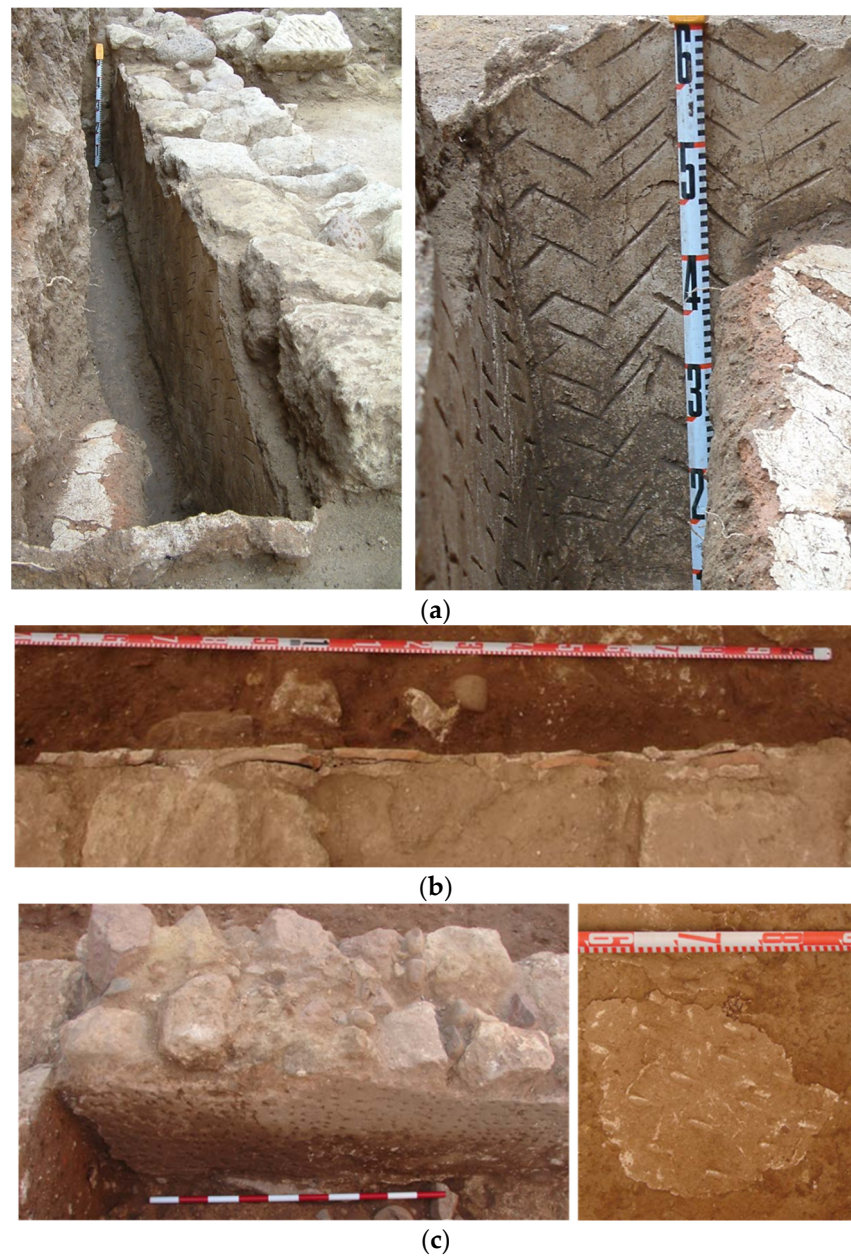


Figure 3. Double layer coatings in the Córdoba of the twelfth century: (a) Ollerías Avenue (Molina Expósito 2004); (b,c) America Avenue (Valdivieso 2007; Molina Expósito 2008).

Finally, although red and white were the most common colours, they could be combined with other pigments, such as yellow or blue (e.g., Navarro Santacruz 2003, p. 82). These colours were utilised in Christian paintings using the “Moorish technique” (*vide supra*). Some of them might have been applied with the secco-technique (cf. Arjonilla et al. 2022) to cover the blank spaces in geometric panels using tempera paint. This mixed technique would allow the meticulous detail required by small, complex motifs that were traced with greater detail and required more time to execute, but they are not as frequently preserved (cf. Robles Fernández 2016, pp. 478–508).

3. The Typology and Evolution of Geometric Pictorial Motifs

The Andalusi pictorial coverings also present a wide variety of ornamental models. They were not specific to the status of their inhabitants (similar motifs are repeated in houses of different qualities) but they do play an important identifying role chronologically,

indicating a certain period of occupation that could extend from the construction of a structure to its abandonment. However, these frescoes were normally made in the first moments of occupation, except when complex structural reforms forced their modification (Figure 1a). Therefore, the date provided by the type of coating may be considered a general chronological indicator of the construction date. Decorative motifs may show important regional and local differences, with different periods of influence depending on the processes and relationships between different centres and convergences of influences, which can lead to variations in minor, but important, details that will need to be specified in future work contemplating the local and the global.

The oldest known Andalusí paintings were made in the 10th century and show notable geometric simplicity, even in important places such as Madīnat al-Zahrā. In this period, the plinths were generally plain, with red almagra representing most of the decorative development (Figure 4a). Sometimes they have white vertical lines, at the base of which, near the floor, red triangular or semi-elliptical figures shaped like tongues may appear. The vertical lines would connect with horizontal lines that would close the composition at the top. In the oldest documented plinths, such as those of Madīnat al-Zahrā, we can also verify the use of plant motifs that are substantially similar to those carved in stone. Most of these decorated bases from the Umayyad period were predominantly red, although they include basic geometric panels, which were especially widespread in the Taifa period (Figures 4b and 5a–c). These were usually occupied by numerous circular, triangular, rhomboidal, or square repetitive symmetrical patterns (Rallo Gruss 1999, pp. 203–19). These designs are seemingly abandoned in later centuries, although the rhombus is also recorded in some cases from the 12th century, appearing as a single, main, isolated motif.



(a)



(b)

Figure 4. Red almagra plinths from the Umayyad/Taifa period: (a) Ya'far's house, Madīnat al-Zahrā' (Vallejo Triano 2010, p. 331); (b) Andalusí house in Plaza del Ángel, Valencia (Parrilla 2022).

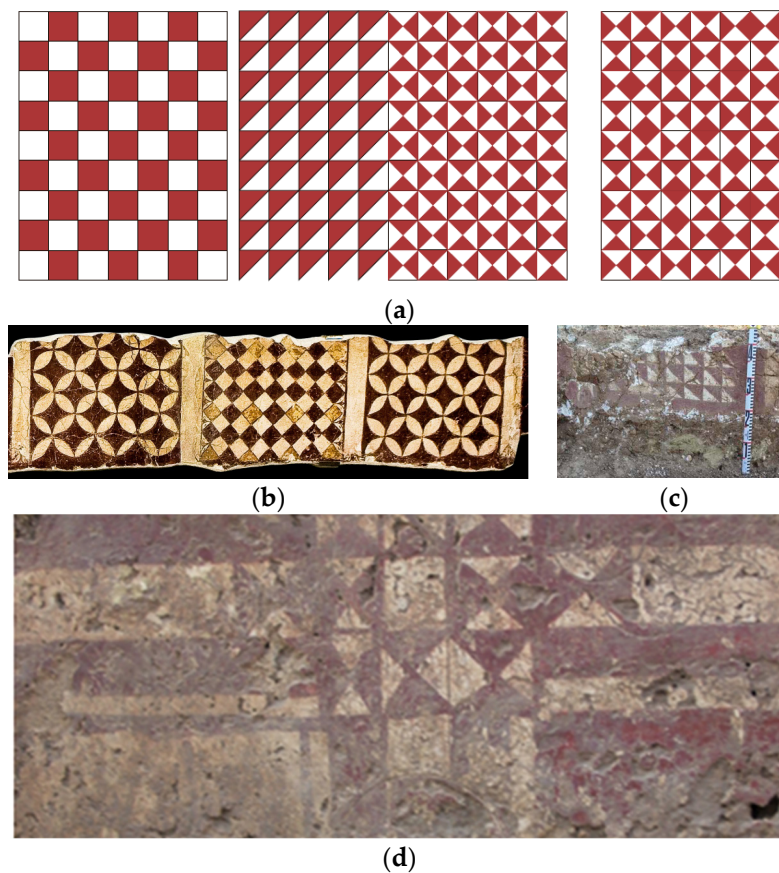
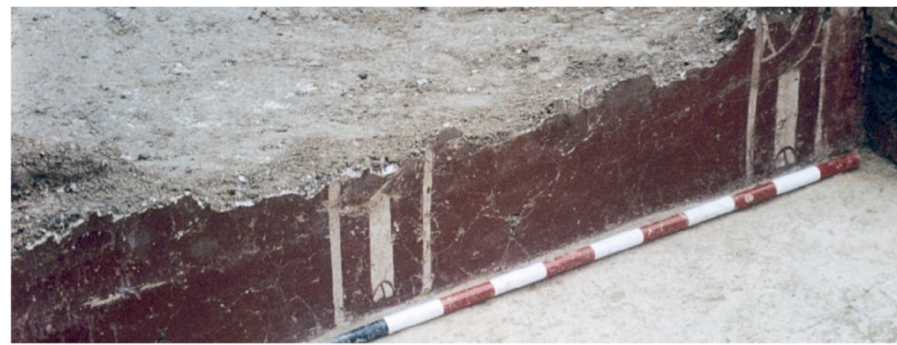


Figure 5. Geometric coatings in the 10–11th centuries: (a) Bayyana (Pechina), Almería (García Granados 2014b, p. 5); (b) Méndez Núñez Street, Almería (García Granados 2014b, p. 7); (c) Huerta de San Pedro, Córdoba (Córdoba de la Llave 2006, Figure 5, p. 300); (d) Ollerías Avenue, Córdoba (López Jiménez 2006).

Triangular shapes can also be seen on the margins, but not the centres, of panels as a characteristic design of the 10th and 11th centuries (Figure 5d). The plinths are mostly painted red and lack intersecting lines, bearing only straight vertical lines that join horizontal ones at the top. At the junction point, they are filled with a series of white and red triangles. Although this motif seems more frequent in the 11th century, it appears in examples from the Umayyad period (Castillo and Martínez 1991, p. 119). In this century, coatings demonstrate an important leap towards knotwork motifs, which will spread profusely in the 12th century. On one hand, the vertical and horizontal lines began to intertwine in the panels (Figure 6a), providing the first examples of simple knots in the panel margins as a prelude to those that would dominate during the following century. Some panels also begin to show primitive knotwork, as can be seen in two cases from Almería in the 11th century, despite their rough and irregular outlines. One has geometric lines in white bordering rhomboidal and triangular figures in red (Figure 6b); this could be an evolution of the earlier chequered pattern motifs. Another, perhaps more advanced, example shows more complex knotwork forms that predict the great variety that will reign in Almoravid and Almohad times (Figure 6c). However, on these walls, a solid almagra red continues to dominate in the pictorial development of the plinths.



(a)



(b)



(c)

Figure 6. Pictorial coatings from the 11th century in Almería: (a,b) Marín Street; (c) Mercado Central (García Granados 2014b, pp. 10, 11, 15).

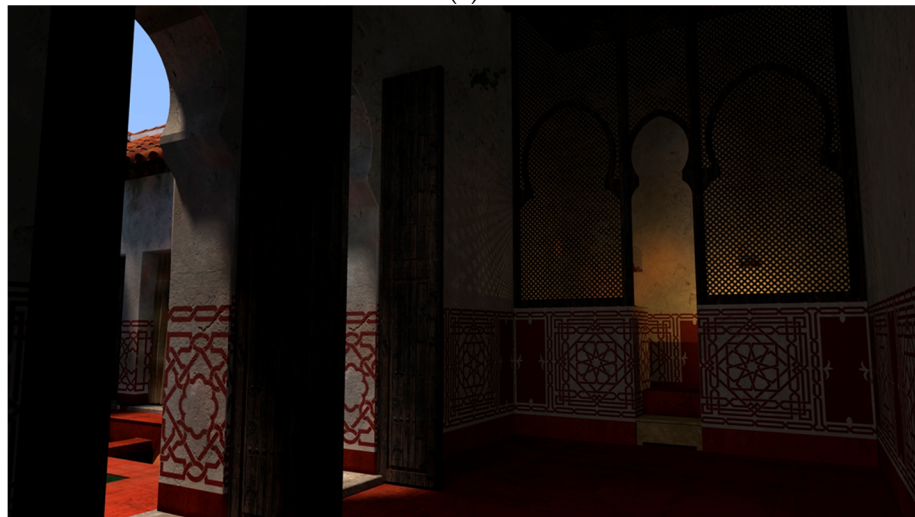
From the 12th century, geometric knotwork motifs spread to wall coverings in residential architecture, as can be seen in Almoravid palaces (Meunié 1952). Patios and main rooms received the most elaborate mural paintings; the rest were covered with red almagra (Rallo Gruss 2003, pp. 116–28; Navarro Palazón 1998). Only the most luxurious homes would have complex motifs in secondary rooms, even in the latrines and toilet areas (Figure 7a). The pictorial program began by extending the red lime mortar floor with a slightly raised red skirting board of about 5–10 cm. Other buildings would have two horizontal red lines on a white background that were connected at certain points and from which vertical chains emerged and delimited different panels; in the humblest houses, this double intertwined line was replaced by a simple horizontal line.

The heights of these panels varied enormously. For example, in late-Islamic Córdoba, those rooms that were only decorated in exceptional homes, such as latrines (Figure 7a), had panels about 50–60 cm tall, but in patios and main rooms, the geometric paintings would be around a metre tall (Figure 7b). In addition, one or two bands or stripes were used as a finishing border (Figure 8a). As some preserved examples show, repetitive elements are usually employed, sometimes of an architectural or epigraphic nature (*vide* Ocaña Jiménez 1945). This is true of the Almohad plinth that was discovered in one of the rooms of the Patio del Yeso in the Seville Alcázar (Valle Fernández and Respaldiza Lama 2000),

in contemporary domestic paintings found in Calle Arrayán in Seville (Figure 8b), and in the Islamic citadel of Malaga (Torres Balbás 1945). This design with epigraphic motifs was fossilised and widespread in Nasrid ceramic plinths (Puerta Vílchez 2007, p. 220). Epigraphy could extend beyond the base, at least after the Almohad period and in the most important houses; this is demonstrated by the plasterwork recorded in Siyāsa (Martínez Enamorado 2009) and Onda (Navarro Palazón and Jiménez Castillo 1995c). Likewise, some red lines from the upper edge of the pictorial section may have ascended above the plinth to define an upper sector that could be marked by red lines, like the one documented in Almería (Figure 8c). Such lines functioned as a kind of frame for tapestries or curtains (cf. Ibn Al-Jaṭīb 1984, p. 204).



(a)



(b)

Figure 7. (a) Latrine in an Islamic house in the Palacio de Orive (Murillo et al. 1992); (b) 3D reconstruction of the Palacio de Orive's house (R. Blanco-Guzmán y J.M. Tamajón).



Figure 8. Geometric paintings in the 12th century: (a) Palacio del Yeso, Sevilla ([Valle Fernández and Respaldiza Lama 2000](#), p. 59); (b) Arrayán Street, Sevilla (Seville Archaeological Museum) ([Villén Muñoz 2012](#), p. 137); (c) La Chanca quarter, Almería ([R. 1945](#), p. 172).

The geometric motifs used in knotwork are similar to those found in other types of ornamentation, such as plasterwork, ceramics, and textiles. We assume that the main themes of these paintings would also apply to other non-preserved supports in residential architecture. Among the motifs, the eight-pointed star is notable (cf. [Cánovas et al. 2007](#), p. 492; [García Granados 2014a](#)). It was made with a square on which another rotated square of similar size was placed (Figure 2a). Its continuous use in Andalusí architecture as a central point of intertwined lines has been well-established since the Umayyad Caliphate on other supports. This can be seen in one of the stone lattices of the Córdoba Aljama, or the minbar of the Kuttubiya ([Bloom et al. 2013](#)).

In pictorial decoration, the eight-pointed star is used with much simpler shapes ([Rallo Gruss 1999](#), p. 228). It must have already been a characteristic symbol during the Umayyad Caliphate and acquired greater use and complexity in the 12th and 13th centuries as a central motif in the decoration of some plasterwork that has come down to us ([Navarro](#)

Palazón 1995). It also appears on many other Almohad supports, such as oil lamps (Zozaya Stabel-Hansen 2005, pp. 368–83), and, in general, on Almohad stamped ceramics (Cavilla 2005, pp. 286–97) and many of the fabrics preserved from the first third of the 13th century. This symbol must have been important to the Almohad regime as it stands as the main figure of a banner of Las Navas de Tolosa (Partearroyo 2005, p. 334). Beyond semiotic disquisitions, the shape was well adapted to the “unitary” philosophy as it was a double square, a geometric element that was widely used in Almohad propaganda (e.g., Vega Martín et al. 2005). Likewise, it could be linked to the ornamentation that was typical of the Andalusi tradition and the Umayyad Caliphate. Other extremely common motifs were derived from this eight-pointed star, including the octagon and a kind of polylobed rosette, a more sinuous shape that turns the eight points into blunt endings that is typical in other supports (Partearroyo 2005, pp. 345–46; Cavilla 2005, pp. 301–2). Another frequently recurring motif is a quadrilobe—perhaps a stylised rosette with four petals—that we see in the 11th century with independent floral elements in the Aljafería (Cabañero and Herrera 2000, p. 223) and which became important during the Almohad period. Sometimes it is formed by four circles crossing each other at the beginning of panels with a red background; a similar solution is also documented in some Almohad textiles (Partearroyo 2005, p. 344) and is suggested in the interiors of some stamped quadrilobes (Cavilla 2005, p. 290).

Vegetable elements usually appeared in a secondary role starting in the 12th century and became particularly common in the second half of the century. These may be highly stylised rosettes (Figure 9a) emerging from the lines of a border delimiting a red background. Other, more realistic plant motifs, usually occur as small white elements on red backgrounds (Figure 9c,d). A common technique in the 12th century is to place exuberant plants as a secondary element that enters from the white backgrounds on one side of a red panel (Figures 9b and 10a). Similar floral motifs are used in stucco decoration (Navarro Palazón and Jiménez Castillo 1995a, 2007), ceramics (Cavilla 2005, p. 304), and contemporary textiles (Partearroyo 2005, pp. 340–41).

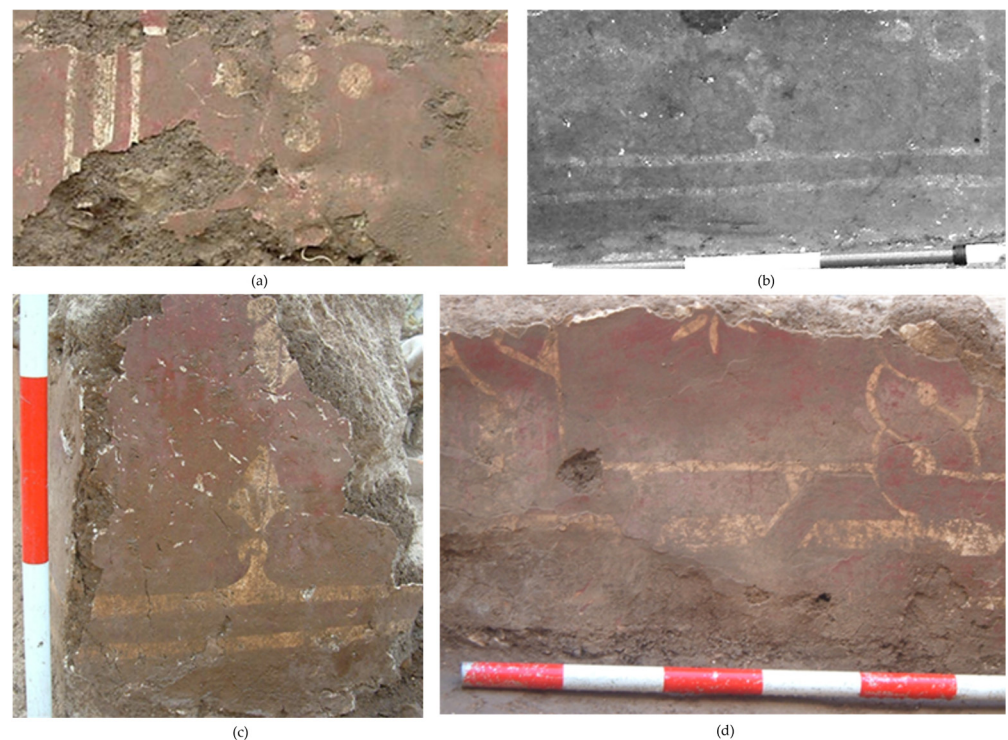


Figure 9. Vegetable elements in the 12th century, Córdoba: (a–c) Ollerías Avenue (Molina Expósito 2004; López Jiménez 2006); (d) Benito Pérez Galdós Street (Liébana Mármol 2008).



(a)



(b)

Figure 10. Style of “bichrome backgrounds”. Animal themes as the main elements on red backgrounds: (a) Fish on a plinth of the Palacio de Orive, 12th century (Murillo et al. 1992); (b) Christian plinths in the Tower of Hercules, Segovia, 13th century (Villanueva Zubizarreta et al. 2023).

Lastly, animal themes, which are common in 12th-century ceramics (Zozaya Stabel-Hansen 2005), appear alternately with geometric designs as the main elements on red backgrounds (Figure 10a). Animal themes often appear in Mudejar painting (Rallo Gruss 1999, p. 81), sometimes in complex scenes, as in the painted plinths of the Segovian Tower of Hercules (Figure 10b).

Most of the paintings documented from the first two-thirds of the 12th century present “bichrome backgrounds”, in which narrow red panels alternate with wider white ones (Figures 7, 9 and 10). In the latter, the intertwined ties are always arranged to form a characteristic central geometric motif, normally highlighting the number eight (with stars, octagons, or polylobes) and always exhibiting a strongly symmetrical, orderly design. These white panels are usually placed close together, separated only by small, vertical, rectangular interpanels that may bear simple geometric motifs.

The naturalistic figurative elements (vegetables and animals) are only introduced in the red-coloured panels and the figures are universally white on a red background². These figurative elements appear outside the white backgrounds unless they are significantly stylised. In the white panels, intertwined geometric motifs dominate.

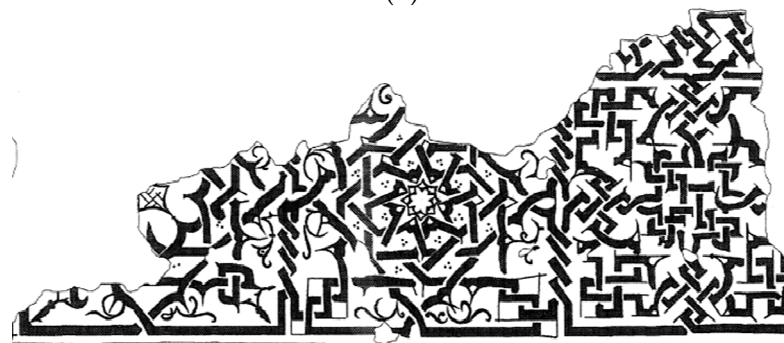
Sometimes, a different style of “white backgrounds” is documented, in which the red panels disappear and, with them, any plant or animal as main motif (Figure 11). In this style, the white base is generalised and increasingly complex knotwork schemes are developed in an exaggerated “*horror vacui*”: the main geometric shapes seem to blur into an amalgamation of confused lines that continually intersect and interrupt themselves. Each central panel is separated from the next by a rectangular intermediate panel that may contain a simple shape, usually a four-lobed, circular, or elliptical pointed central motif. This interpanel also appears in the “bichrome backgrounds” style (Figures 7a and 8c).



(a)



(b)



(c)

Figure 11. Style of “white backgrounds”, about the last third of the 12th century: (a) Palacio de Orive, Córdoba (Murillo et al. 1992); (b) Algeciras (López Rodríguez and Gestoso 2009, p. 234); (c) Cathedral of Sevilla (Jiménez Sancho 1999, p. 385).

Both styles, according to the existing information on parietal paintings in the medieval Islamic West, can be read through the general evolutionary context of al-Andalus. The preserved examples affirm that in the Umayyad period, there was sober decoration on the

plinths of houses: red almagra filled most of the bases, other than some basic geometric motifs, such as squares, triangles, or rhombuses. The bichrome backgrounds style seems to have gradually taken shape in the 11th century (García Granados 2018a), and we can verify its presence in the Almoravid period. It developed in the Maghreb at the beginning of the 12th century. We can see this by observing the plinths of the Yūsuf palace in Marrakech (Meunié 1952) and the houses excavated in the al-Qarawiyyīn mosque in Fez. These buildings, purchased by ‘Alī b. Yūsuf to extend the mosque, were cut into to create the foundation ditch for the Almoravid qibla wall, so we have a well-known *ante quem* date for this style in the Maghreb: the year 1134 (Ettahiri et al. 2012).

The use of this style must have continued in al-Andalus during the second half of the 12th century. Their presence has been verified in the Mardanišī area (Navarro Palazón 1998; Navarro Santacruz 2003; García Granados 2018b), in which “Almoravid” models were maintained due to their resistance to unitary politics (Navarro Palazón and Jiménez Castillo 1995a, p. 85). The style also appears in Almohad Córdoba; as, for example, in the pottery quarter of Ollerías, which used decorative motifs analogous to those in Mardanišī’s buildings (Figure 9b,c) in houses built around the 1160s and abandoned 20 years later (Blanco-Guzmán 2019).

As a working hypothesis that should be explored in the future, the style of the bichrome backgrounds could be an evolution of the extensive Umayyad red backgrounds or, better still, a transition towards a style that progressively suppressed the red base. The white backgrounds would indicate a further step, and they dominated from the end of the 12th century, in Almohad times (Figure 11). Eliminating the red backgrounds involved suppressing the figurative forms and further developing the geometric ones.

Unlike ceramics, whose spread is easier due to their portability, architectural decoration likely offers greater local stability. Stylistic transfers would force the workshops -or their clients- to travel, see, and assimilate other models, in addition to intending to copy and reproduce them, something that would not always happen in the same way nor in all places at the same time. Some designs would not be successful beyond their particular place and time, while others would appear consistently across al-Andalus in different stages and potentially over decades. Of course, some designs would be rejected in some places or retained longer in others, depending on the idiosyncrasies of each place and the socio-political stability of the moment. Dangerous times could make travel between cities, even the closest ones, difficult; this was common throughout the unstable 12th century. This is an important issue to consider when standardising stylistic criteria in decorative motifs. Furthermore, the archaeological record sometimes gives distant dates for similar decorative forms. This should be researched in the future as it could offer a much more accurate vision of the different realities and links between the urban centres of al-Andalus and the Maghreb.

For instance, the white backgrounds style does not display the pointed finial in Córdoba before the 1180s, but they were used in Marrakech during the first third of the 12th century. In turn, these forms could have evolved into the ogives or drops that characterise the Almohad designs of the last quarter of the century (Villén Muñoz 2012, p. 130) and beyond the 13th century. They appear in a house amortised by the construction of the Almohad Aljama Mosque in Seville, predating 1172 (Figure 11c), as well as in the Patio del Yeso (Figure 8a) and, for example, an Almohad house in Niebla (Beltrán Pinzón 2003). In the suburbs of late Islamic Córdoba, built during the 1160s and abandoned in the early 1180s, no paintings with ogives at the vertices have been found, but they do exist in houses that are preserved within the walls that date to the last quarter of the 12th century or the beginning of the 13th (Villén Muñoz 2012, p. 130). Of course, these ogives or drops in the angle finials seem to be somewhat widespread in the second half of the 12th century, but their utilisation in al-Andalus and the Maghreb must have been irregular over time.

Additionally, the bichrome backgrounds style that is well-defined in the Almoravid period continues to be used in some places for some time. This was the case in the late Islamic suburbs of Córdoba, where houses were built in the 1160s with this design after

the Almohads freed the city from the siege to which it had been subjected (*vide* Blanco-Guzmán 2019; Ibn Ṣāḥib Al-Ṣalāt 1969, pp. 49–51). Perhaps its early construction led to the use of “old” models in the paintings used in this Almohad extension, or perhaps the new Almohad models with white backgrounds and drops—already used in Seville before 1172—took longer to be introduced in Córdoba. This could explain why they only appear in the intramural sectors, whose diachronic occupation was much broader until the Christian conquest in 1236. Curiously, a similar process is observed in ceramics in Qurtuba, defining two “Almohad” moments: the first, before 1190, is continuous with that of the Almoravid period, followed by another that would exhibit formal, technical, and ornamental changes (c. 1190–1236); there is also no significant evidence of the latter in extramural spaces (Salinas Pleguezuelo 2012, pp. 775–79).

An interesting feature of the bichrome backgrounds style, compared to the white backgrounds, is that these had figurative elements, plants or animals, in the red panels. Maybe because the unitary doctrine was further adopted in al-Andalus in the last third of the 12th century, the red panels and their figurative motifs may have been abandoned and the geometric knotworks then acquired greater importance and complexity. Therefore, the different assimilation of the Almohad doctrine could influence the use of this style as well. In the Merini period, as various wall paintings in Ceuta show (Figure 12a), the characteristic ogives of the Almohad period are highly developed, although the knotwork had become more stylised and rounded and the lines lost the more angular forms of the 12th century. During the 13th and 14th centuries, the apparent “ordered chaos” of the complex geometric figures on Almohad white backgrounds disappeared, as well as the simpler and more orderly bichrome backgrounds, governed by a single central motif on white backgrounds (Figure 12). In this late period, the designs return to a system that is somewhat reminiscent of the 10th- and 11th-century panels with geometric chequerboard motifs or circles, and they use a *secco*-technique (Torres Balbás 1945; Villada Paredes and Hita Ruiz 2017; Rallo Gruss 1998). However, in these new cases, the repeating central motifs are surrounded and outlined by knotwork motifs. García Granados (2014a, p. 29) relates this style to a fresco recorded in the Almoravid palaces of Marrakech, which opens an intriguing research perspective regarding geometrical design and regional transfers. Therefore, we must consider that the stylistic influences from the Maghreb after the end of the 11th century, due to the domination of al-Andalus by the North African dynasties, introduced changes in the development of Andalusian styles. This is evident in the Cuarto Real de Santo Domingo in Granada, which was built between the end of the 13th century and the beginning of the 14th. The Nasrid palaces, as shown by the paintings in Granada (Figure 12b,c), maintain designs of similar shapes that are ordered and repeated several times on the panel, which are generally transferred to the Nasrid and Mudejar tiles (Rallo Gruss 1998, 1999; García Bueno et al. 2003; García Granados 2014a).

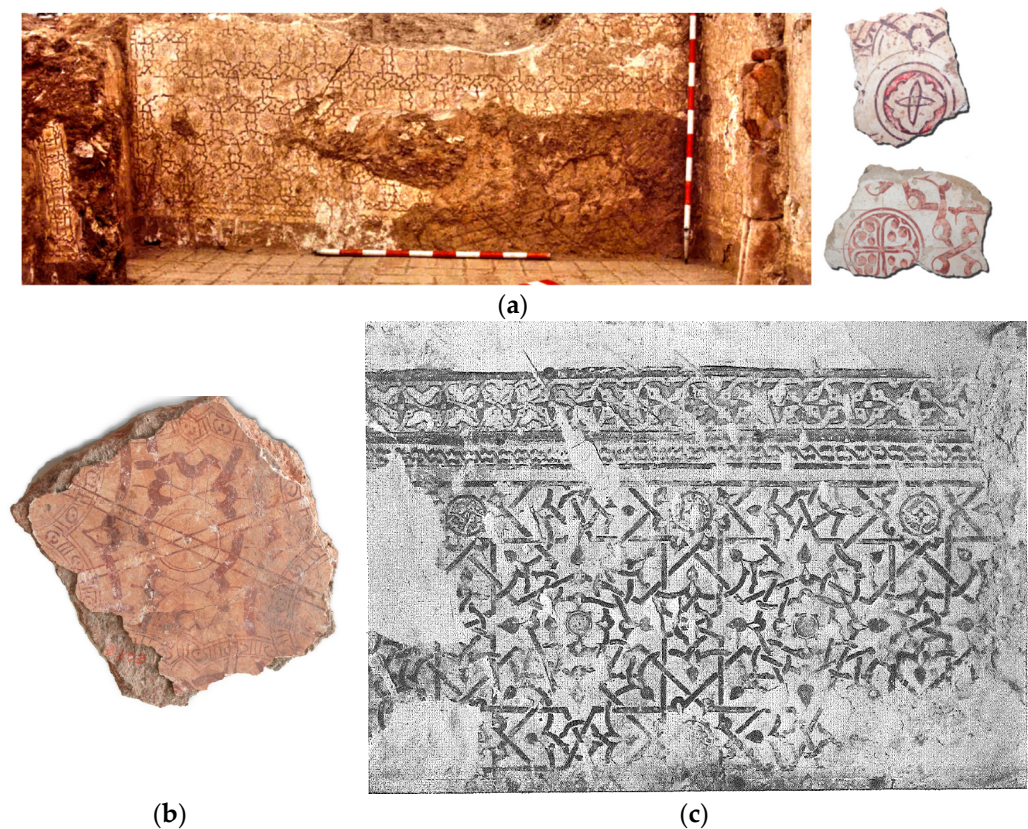


Figure 12. Late Islamic paintings in al-Andalus: (a) Huerta Rufino, Ceuta, late 13th–early 14th century (Villada Paredes and Hita Ruiz 2017, p. 254–55); (b) Dār al-'Arūsa Palace, Granada, middle of the 14th century (Patronato de la Alhambra 2018); (c) Sala de la Barca, Alhambra, Granada, 14th century (Torres Balbás 1942, p. 130).

4. Conclusions

Andalusi residential architecture maintained, at least since the 10th century, a stereotypical patio-house scheme that was constructed with various materials, depending on the time and place, including masonry, brick, ashlar, etc. They would be finished with an important decorative epidermis that was composed mainly of wood, stone, plaster, or lime. The lime mortar was fundamental to the construction because it protected the internal materials and insulated them from humidity. It was not limited to functionality but also had a fundamental ornamental role. Although we are unaware of the techniques and styles used before the Islamic conquest and throughout much of the Umayyad Emirate period, from the 10th century, the known cases show a certain sobriety in their painted bases. They were generally dominated by almagra red, with some vertical and horizontal white listels and some basic geometric panels that generally bear chequered motifs or other repetitive patterns. In the 11th century, there seems to have been a greater tendency towards complexity. The simple lines that delimited the panels began to intersect and some primitive knotwork panels, although very simple, appeared. In the 12th century, these geometric elements with red knots on white backgrounds acquire greater importance, first sharing space with red panels on which figurative elements appear in white. These panels disappeared towards the last third of the 12th century, perhaps due to the rigour of the unitary doctrine, and a tendency towards complicated knot motifs appeared simultaneously. These lasted throughout the 13th and 14th centuries, with more stylised lines creating smaller and more ordered motifs that were repeated across the surface. With small transformations, this style extended to the Nasrid kingdom and even to the development of the tiled plinths from that period.

The brief synthesis that I have provided remains a broad, general vision that, as we have seen in some cases, should be detailed with regional and local particularities, which could also allow us to glimpse possible chrono-spatial networks of influences. Decorated surface coatings have not been studied in depth in al-Andalus; particularly compared with the study of ceramics. However, the importance of parietal paintings for understanding the development of this region is as important as other elements. How these non-transportable elements could be visualised by clients or workshops to demand or introduce one motif or another, and how and why they decide to copy some of them, should also be examined. Worker-to-worker exchanges could have been frequent, but it is worth asking which buildings could also function as main centres of diffusion. The great palaces and houses would not have been accessible to most of the population; instead, highly visited spaces, such as mosques, must be considered. Nevertheless, while geometric, epigraphic, and, perhaps, plant forms would be possible within these religious buildings, animal motifs must have been alien to such settings (cf. [Delgado Pérez 2022](#)). In that case, we must contemplate other highly frequented places, such as inns, luxury souks, and other public or common buildings. Highlighting the detail and effort put into these decorative elements, which appear even in some of the humblest houses, is interesting. This delicate decoration suggests that these habitational environments, although they have been understood as highly hermetic, could have been visited by people other than the family, especially patios and living rooms.

Regardless, the study of this topic is in its incipient stage. We currently have many frescoes that were excavated over the last few decades, but most of them are waiting in numerous museum depositories to be studied. In the future, they will have to be analysed intensively to better specify their typologies and understand the local and global evolution of these styles with greater certainty.

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Notes

- ¹ Own translation from old Castilian to English: “Regarding the fresco painting of the plinths, the following must be done: First, we order that because in this painting there can be no deceit, because it is painted with very poor colors such as *acofaira*, *almagra* or *prieto*, and because these must be introduced into the slaked lime with water and white lead to do this work with lime, because it remains; this painting fade out and changes to black, if *azarcón* is added instead of vermilion; however, if you need to put some fine blue or verdigris green, first you have to let the lime dry, and then put the aroly green and the blue with egg tempera”.
- ² There is an exceptional case inside a pool in Bédar (Almería), classified as “unicum” and without a clear date or functionality. It shows a hunting scene in red on a white background, alternating with epigraphy and a chequerboard panel. It is a controversial and unusual case and diverges from what we usually document in Andalusí residential spaces ([Gilotte 2014](#)). C. Barceló dates this painting in the year 966 through the epigraphy ([Barceló 2020](#)).

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