

Materiality, reception and symbolism of color in the monumental sculpture of the Catalan Counties: the porticoes of Ripoll and Agramunt¹

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Resumen: Durante mucho tiempo, las portadas románicas fueron interpretadas como estructuras pétreas esencialmente monocromas, una percepción condicionada en gran medida por el estado actual de conservación de los monumentos más que por su apariencia original. Las recientes campañas de restauración, junto con los análisis científicos y estratigráficos, han demostrado que muchos de estos monumentos estuvieron originalmente cubiertos de pigmentos y decoraciones metálicas. Este artículo examina el papel del color en las portadas monumentales románicas de los Condados Catalanes a través del análisis de dos casos de estudio: la portada del monasterio de Santa Maria de Ripoll (mediados del siglo XII) y la portada de Santa Maria de Agramunt (1283). Combinando la evidencia técnica procedente de estudios de restauración y análisis estratigráficos con la interpretación simbólica del color medieval, el artículo analiza cómo pigmentos, dorados y formas escultóricas interactuaban para crear complejos programas visuales y superficies cromáticas en constante transformación. Al situar estas portadas dentro de un contexto europeo más amplio de escultura policromada medieval, el estudio demuestra que el color desempeñó un papel fundamental en la organización jerárquica de los programas escultóricos y en la transmisión de sus significados teológicos.

Palabras clave: escultura románica policromada; policromía medieval; portadas monumentales; Ripoll; Agramunt; simbolismo del color.

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Abstract: For a long time, Romanesque portals were interpreted as essentially monochrome stone structures, a perception largely shaped by the present condition of the monuments rather than by their original appearance. Recent restoration campaigns, together with scientific and stratigraphic analyses, have demonstrated that many of these monuments were originally covered with pigments and metallic decorations. This article examines the role of color in Romanesque monumental portals in the Catalan Counties through the analysis of two case studies: the portal of the monastery of Santa Maria de Ripoll (mid-twelfth century) and the portal of Santa Maria d'Agramunt (1283). Combining technical evidence from restoration studies and stratigraphic analyses with the interpretation of medieval color symbolism, the article explores how pigments, gilding and sculptural form interacted to create complex visual programs and evolving chromatic surfaces. By situating these portals within a broader European context of medieval polychrome sculpture, the study demonstrates that color played a crucial role in structuring visual hierarchies and reinforcing the theological meanings of monumental portals.

Keywords: polychrome Romanesque sculpture; medieval polychromy; monumental portals; Ripoll; Agramunt; symbolism of color.

Sumario: 1. Introduction. 2. The rediscovery of polychromy in medieval sculpture. 3. Techniques and symbolic meaning of polychromy in medieval stone sculpture. 4. The portico of Ripoll: the image of Christ as Lux Mundi. 5. The portico of Agramunt: pigments and trans-regional networks. 6. Polychromy and the visual experience of medieval portals. 7. Conclusions. 8. References.

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1. Introduction

The study of polychromy in Romanesque monumental sculpture represents one of the most significant challenges within current medieval art historiography. For a long time, the historiographical perception of medieval sculpture was shaped by the survival of bare stone surfaces, leading to the widespread assumption that sculptural programs were conceived without color. However, recent restoration campaigns and scientific analyses have demonstrated that medieval sculpture originally possessed a complex chromatic dimension that fundamentally shaped its visual appearance and meaning.

These discoveries have prompted a reassessment of the role played by color in the interpretation of monumental sculpture. Instead of functioning as a simple decorative layer, color formed an integral element of the visual conception of medieval sculpture, closely linked to the material processes of artistic production and to the symbolic language of Christian imagery².

Despite this renewed interest, research on medieval color has traditionally focused on mural painting and manuscript illumination, while the polychromy of monumental sculpture has received comparatively less attention. This imbalance is largely due to the fragmentary preservation of chromatic vestiges on sculptural surfaces. Nevertheless, restoration analyses increasingly reveal that color was originally integral to the conception of many sculptural programs.

Within the territories of the Catalan Counties, several Romanesque portals preserve traces of medieval polychromy. Although these remains are often fragmentary, they provide valuable evidence for reconstructing the original appearance of monumental sculpture. Among the most significant examples are the portal of the monastery of Santa Maria de Ripoll and the portal of Santa Maria d'Agramunt.

This article examines these two monuments from a combined technical and interpretative perspective. By analyzing the pigments identified during restoration campaigns and relating them to the procedures described in medieval artistic treatises, it becomes possible to reconstruct the techniques employed by medieval workshops. At the same time, the symbolic interpretation of color allows these chromatic programs to be understood within the theological and visual culture of the Middle Ages. The evidence examined here suggests that polychromy was not a secondary addition but an integral and constitutive element of the sculptural program, revealing both local workshop practices and transregional artistic networks.

2. The rediscovery of polychromy in medieval sculpture

The rediscovery of polychromy in medieval sculpture has significantly altered the interpretation of Romanesque monuments. Scholars have increasingly emphasized that the absence of color in many sculptures today is largely the result of centuries of

weathering, repainting and restoration interventions rather than a reflection of their original appearance.

Research on medieval polychromy has developed along two main lines of investigation³. On the one hand, technical studies have examined the pigments, binding media and painting techniques used by medieval workshops. Scientific analyses carried out during restoration campaigns have identified a wide range of materials, including mineral pigments such as cinnabar, iron oxides, lead white and carbon black. These studies have demonstrated that medieval sculptors and painters collaborated closely in the creation of polychrome sculptural ensembles.

On the other hand, historians of color have explored the symbolic meanings associated with different pigments in medieval culture⁴. The symbolic interpretation of color in the Middle Ages did not operate through a rigid or universal code. Its meaning varied according to context, imagery and cultural associations.

The restoration of major monuments has played a crucial role in advancing the study of medieval polychromy. One of the most influential examples is the restoration of the Pórtico de la Gloria in Santiago de Compostela, which revealed extensive traces of medieval polychromy and demonstrated that the sculptural ensemble was originally entirely painted⁵. Similar findings have been documented in several Romanesque and Gothic portals across Europe⁶.

³ See Eliana Billi, *Tracce di colore. Policromia di sculture in pietra nell'Italia tardomedievale. Studi e restauri* (Rome: Artemide, 2017); Ana María Cuesta Sánchez, *El Monasterio de San Salvador de Oña. Gestión del patrimonio pétreo policromado medieval*, PhD diss. (Madrid: Universidad Complutense de Madrid, 2023); Laia Cutrina Gallart, "Una experiencia visual para el peregrino: portadas monumentales policromadas en las rutas a Santiago en Cataluña (ss. XII-XIII)," *Ad Limina* 14 (2023): 147-181; Carmen Gómez Urdáñez, *Sobre el color en el acabado de la arquitectura histórica* (Zaragoza: Pressas de la Universidad de Zaragoza, 2013); Jorge Rivas López, *Policromías sobre piedra en el contexto de la Europa medieval*, PhD diss. (Madrid: Universidad Complutense de Madrid, 2008); Delphine Steyaert and Denis Verret, *La couleur et la pierre. Polychromie des portails gothiques* (Paris: Picard, 2002), and *Circumlitio: The Polychromy of Antique and Medieval Sculpture*, ed. Vinzenz Brinkmann, Oliver Primavesi and Max Hollein (Munich: Hirmer, 2010), among others.

⁴ See Michel Pastoureau; Dominique Simonnet, *Breve historia de los colores*, Barcelona, Paidós, 2006 and Frédéric Portal, *El simbolismo de los colores en la Antigüedad, la Edad Media y los tiempos modernos*, Barcelona, Sophia Perennis, 2016, among others.

⁵ Miguel Taín Guzmán, "Una historia del color. Análisis histórico de las policromías del Pórtico de la Gloria," in *La restauración del Pórtico de la Gloria. Catedral de Santiago de Compostela. Documentación, estudios y conservación*, Patrimonio Cultural de España, 6 (Madrid: Ministerio de Cultura y Deporte, 2021), 63-120. See also in the same publication: Mercedes Cortázar and Andrés Sánchez, "Estudio de la secuencia de policromías y de la composición de los materiales empleados en las decoraciones del conjunto escultórico del Pórtico de la Gloria de la catedral de Santiago de Compostela," in *La restauración del Pórtico de la Gloria*, 121-182; Stefanos Kroustallis and Rocío Bruquetas, "La policromía del Maestro Mateo en el Pórtico de la Gloria: un estudio de tecnología artística," in *La restauración del Pórtico de la Gloria*, 213-234.

⁶ See, among others: Delphine Steyaert and Denis Verret (eds.), *La couleur et la pierre. Polychromie des portails gothiques* (Paris: Picard, 2002); Eliana Billi, *Tracce di colore. Policromia di sculture in pietra nell'Italia tardomedievale. Studi e restauri* (Rome: Artemide, 2017); Bénédicte Fillion-Braguet, Nathalie Le Luel and Cécile Mathurin (eds.), *La pierre, la couleur et la restauration: le portail polychromé de la*

² Walter Sauerländer, "Quand les statues étaient blanches: discussion au sujet de la polychromie", en Denis Verret; Delphine Steyaert (eds.), *La couleur et la pierre. Polychromie des portails gothiques*, Paris, Picard, 2002, pp. 27-34.

Within the Iberian Peninsula, recent research has increasingly focused on the technical and historical aspects of polychrome sculpture. These studies have highlighted the importance of integrating scientific analyses with art-historical interpretation in order to reconstruct the original appearance of medieval monuments.

3. Techniques and symbolic meaning of polychromy in medieval stone sculpture

The presence of color in medieval stone sculpture was the result of a complex technical process that required both specialized materials and artistic knowledge. Far from being a secondary addition applied after the completion of the sculpture, polychromy formed an integral part of the visual conception of medieval sculptural programs.

The application of color to stone surfaces involved several stages. Before pigments could be applied, the sculpted surface had to be prepared through the application of priming layers that stabilized the support and created a suitable base for painting. Medieval artistic treatises describe the use of preparatory coatings composed of materials such as lime, lead white or animal glue, which were applied to the stone in order to create a smooth and receptive surface for pigments⁷.

Once the preparation layer had been applied, pigments were mixed with binding media and painted onto the sculpture. Medieval painters used a relatively limited palette composed primarily of white, yellow, red, blue, green and black pigments. These colors were obtained from mineral or organic substances that were ground and mixed with binding media such as egg tempera, linseed oil or animal glue. The resulting mixtures were applied in successive layers in order to create chromatic contrasts and enhance the legibility of sculptural forms⁸.

The techniques used to paint stone sculpture were closely related to those employed in mural painting and panel painting. Medieval treatises rarely distinguish between these supports, suggesting that painters followed similar procedures regardless of whether the surface was wood, wall or stone. In this sense, the polychromy of monumental sculpture should be understood as part of a broader artistic practice in which sculptors and painters collaborated in the creation of complex visual programs.

Beyond its technical dimension, color also carried symbolic meanings that were deeply embedded in medieval culture. Medieval theories of color were strongly influenced by theological conceptions of light. In Christian thought, light was frequently interpreted as a manifestation of divine presence, while color was understood as the visible effect produced by light interacting with matter. Within this conceptual framework, the chromatic appearance of works

of art acquired a symbolic significance that went beyond their purely material qualities⁹.

Certain pigments were therefore associated with prestige, authority or sacred presence¹⁰. Gold, in particular, played a fundamental role in medieval visual culture. When applied to halos or other elements of sacred figures, gilding created luminous focal points that emphasized the spiritual authority of the represented figure. The reflective surface of gold interacted with natural light, producing visual effects that reinforced the association between divine presence and luminosity.

Other pigments also acquired symbolic connotations depending on their context of use. Blue, for example, gradually became associated with royal authority and celestial transcendence during the later Middle Ages¹¹, while red could evoke power, sacrifice or authority. These meanings were not fixed but depended on the visual and narrative context in which the color appeared.

Understanding the polychromy of Romanesque portals therefore requires considering both its material and symbolic dimensions. Pigments, gilding and chromatic contrasts were not merely decorative additions but fundamental components of the sculptural program. Through the interaction of sculpture, color and light, medieval artists created complex visual systems capable of guiding the viewer's gaze and reinforcing the theological meanings embedded in monumental portals¹².

4. The portico of Ripoll: the Image of Christ as *Lux Mundi*

The monumental portal of the monastery of Santa Maria de Ripoll, generally dated to around 1140–1150, constitutes one of the most significant examples of Romanesque sculptural polychromy in the Catalan Counties¹³. Although the stone carving of the portal has traditionally attracted most scholarly attention, the surviving traces of color reveal that its original visual impact depended to a great extent on its

cathédrale d'Angers (XIIe–XXIe siècle). Contribution à l'étude des portails médiévaux en France et en Europe (Rennes: Presses Universitaires de Rennes, 2024).

⁷ Theophilus, *On Divers Arts*, trans. John G. Hawthorne and Cyril Stanley Smith (New York: Dover Publications, 1979); Cennino Cennini, *Il libro dell'arte*, ed. Franco Brunello (Vicenza: Neri Pozza, 1988), among others.

⁸ Eliana Billi, *Tracce di colore, passim*; Jorge Rivas López, *Policromías sobre piedra*, 389–396.

⁹ Pastoureaux and Simonnet, *Breve historia de los colores*, 23–25, 57–60, 103–104; Portal, *El simbolismo de los colores*, 15, 28.

¹⁰ Laia Cutrina Gallart, "Els colors del poder: la simbologia del diví i l'autoritat a través de l'escultura policromada," in *Modelant cultures: el concepte de poder a través de l'herència material, artística i musical al llarg de la història. Jornades d'Estudis Doctorals d'Art i Musicologia*, 15–16 December 2022, Universitat Autònoma de Barcelona, Bellaterra, 3 (Bellaterra: Universitat Autònoma de Barcelona, 2022), 63–75.

¹¹ Michel Pastoureaux, *Azul. Historia de un color* (Madrid: Alianza Editorial, 2010).

¹² Cutrina Gallart, "Una experiencia visual para el peregrino," *passim*.

¹³ For a detailed technical analysis of the portal of Santa Maria de Ripoll, see the restoration reports: CRBMC (Centre de Restauració de Béns Mobles de Catalunya), *Santa Maria de Ripoll, Portada* (Barcelona: Patrimoni-UB, Universitat de Barcelona, 2004); Pilar Giráldez and Màrius Vendrell, "La portalada de Santa Maria de Ripoll: estudi analític de les restes de policromia i tractaments superficials. Assaig de cronologia," in *La portalada de Ripoll. Creació, conservació i recuperació* (Rome: Viella s.r.l.-IRCVM, 2018), 175–182; Patrícia Amat and Rudi Ranesi, *Memòria de la intervenció de conservació-restauració de la Portalada del Monestir de Santa Maria de Ripoll* (Barcelona: Arcovaleno Restaura SL and CRBMC – Centre de Restauració de Béns Mobles de Catalunya, 2018).

painted and gilded surfaces. Behind the present sculptural façade, moreover, there remain vestiges of an earlier painted portal from the time of Abbot Oliba (XIth century), indicating that the site already possessed a strong chromatic tradition before the execution of the great twelfth-century portal¹⁴.



Fig. 1. Remains of the 11th-century porta picta, upper parapet. Photo: © CRBMC – Centre de Restauració de Béns Mobles de Catalunya.

Only a small portion of the original medieval polychromy survives today, owing both to prolonged exposure to the elements and to later damage, including the fire of 1835¹⁵. Even so, the restoration campaigns carried out in recent decades, and especially the intervention of 2016, made it possible to identify a complex sequence of superimposed layers that fundamentally altered the appearance of the monument over time¹⁶. Stratigraphic analysis revealed at least three main campaigns of color: the original Romanesque layer of the twelfth century, a Gothic repainting from the late thirteenth or early fourteenth century, and a final black coating probably applied in the seventeenth century¹⁷.

The Romanesque polychromy is concentrated mainly in the figure of Christ in Majesty and in selected elements of the first sculptural register. The pigments identified include red iron-rich clays, lead white in the preparation layer, and carbon black, especially in facial details such as the eyebrows of

Christ and the nearby angels¹⁸. These materials correspond closely to the palette most commonly documented in medieval stone polychromy and also to the procedures described in artistic treatises, where the preparation of the surface and the use of mineral pigments formed the essential basis of pictorial practice¹⁹.



Fig. 2. Black charcoal (Romanesque polychromy) detected on the figure of the angel.

Photo: © CRBMC – Centre de Restauració de Béns Mobles de Catalunya.

The most remarkable feature of the original polychromy is the false gilding identified in the halo of Christ. This consisted of a pewter sheet coated with a yellow varnish in order to imitate the appearance of gold²⁰. Such a technique is especially important because it connects the portal not only to monumental sculpture but also to the broader technical culture of medieval painting. The procedure closely recalls the *petala de stagno* and, even more significantly, the *deuratio facilis* recorded in *Madrid, BNE, mss/19*, a codex very probably linked to the scriptorium of Ripoll itself²¹. In this sense, the portal provides strong evidence that technical knowledge circulating in monastic scriptoria and panel-painting workshops could be adapted to stone sculpture. The painter responsible for the polychromy was therefore not a

¹⁴ Giráldez and Vendrell, "La portalada de Santa Maria de Ripoll," 178; CRBMC, *Santa Maria de Ripoll, Portada* (Barcelona: Patrimoni-UB, 2012), 99–101.

¹⁵ Pere Rovira i Pons, "Història de la conservació i la restauració de la portalada de Ripoll," in *La portalada de Ripoll. Creació, conservació i recuperació* (Rome: Viella, 2018), 143–166.

¹⁶ CRBMC; P. Amat; R. Ranesi, *Memòria de la intervenció de conservació-restauració de la portalada del Monestir de Santa Maria de Ripoll (setembre 2016 – gener 2017)* (Barcelona: CRBMC / Arcovaleno Restauro, 2018).

¹⁷ CRBMC, *Santa Maria de Ripoll, Portada*, 97–99.

¹⁸ CRBMC, *Santa Maria de Ripoll, Portada*, 101–104; Arcovaleno Restauro; CRBMC, *Memòria de la intervenció*, 24–25.

¹⁹ Theophilus, *On Divers Arts*, trans. John G. Hawthorne and Cyril Stanley Smith (New York: Dover Publications, 1979); Cennino Cennini, *Il libro dell'arte*, ed. Franco Brunello (Vicenza: Neri Pozza, 1988).

²⁰ Giráldez and Vendrell, "La portalada de Santa Maria de Ripoll," 180.

²¹ Manuel A. Castiñeiras, "Entorn als orígens de la pintura romànica sobre taula a Catalunya: els frontals d'Urgell, Ix, Esquius i Planès," *Butlletí del Museu Nacional d'Art de Catalunya* 9 (2008): 33–35 and CRBMC, *Santa Maria de Ripoll, Portada*, 99–101.



Fig. 3. Madrid, BNE, mss/19, fols. 201v–201r. The formula for *deuratio facilis* is described on the right-hand page (fol. 201r).
Source: © Biblioteca Nacional de España.

narrowly specialized artisan, but rather a polyvalent practitioner capable of translating techniques across different media²².

This connection becomes even clearer in the later Gothic repainting. During that phase, the original false gilding was replaced by mordant gilding, whose mixture included verdigris, lead white, clay, copper carboxylates, kaolinite, chalk and drying oil²³. A similar mordant-gilding technique was also applied to the beard and hair of Christ, further reinforcing the luminous centrality of the figure. In technical terms, this later intervention is especially revealing because it corresponds closely to procedures described in medieval treatises, particularly in Cennino Cennini's instructions for mordant gilding²⁴. Ripoll thus offers an exceptional case in which the evidence of restoration can be read alongside written technical sources and interpreted as part of a continuous tradition of workshop knowledge.

The concentration of gilding in the figure of Christ was not accidental. In medieval visual culture, gold was strongly associated with divine light, celestial authority and sacred presence²⁵. The halo of Christ at Ripoll therefore functioned not only as an ornamental

device but also as a theological sign. The image must be understood in relation to the scriptural concept of Christ as the *Lux Mundi*²⁶. Under natural light, the gilded halo would have produced flashes and reflections that attracted the attention of the viewer and visually distinguished Christ from the surrounding figures. Color, in this case, worked directly with iconography to construct a hierarchy of vision.



Fig. 4. Mordant gilding applied in the beard and hair of Christ. Photo: © CRBMC – Centre de Restauració de Béns Mobles de Catalunya.

The symbolic and visual logic of this device places Ripoll within a much broader European context. The use of gilding to emphasize divine figures is attested

²² Anne Leturque, *Sensim per partes discutuntur quaelibet artes...*, PhD diss. (Montpellier / Bellaterra, 2015); Cutrina Gallart, "Una experiencia visual para el peregrino," *Ad Limina* 14 (2023): 178–180.

²³ Arcovaleno Restauo; CRBMC, *Memòria de la intervenció*, 24–25.

²⁴ Cennini, *Il libro dell'arte*, chap. CLI; Arcovaleno Restauo; CRBMC, *Memòria de la intervenció*, 24–25.

²⁵ Michel Pastoureau and Dominique Simonnet, *Breve historia de los colores* (Barcelona: Paidós, 2006); Frédéric Portal, *El simbolismo de los colores en la Antigüedad, la Edad Media y los tiempos modernos* (Barcelona: Sophia Perennis, 2016); Laia Cutrina Gallart, "Els colors del poder: la simbologia del diví i l'autoritat a través de l'escultura policromada," in *Modelant cultures...* (Bellaterra: Universitat Autònoma de Barcelona, 2022), 63–75.

²⁶ John 8:12–36.

in numerous monumental portals and sacred ensembles, especially along transregional routes of exchange and pilgrimage²⁷. In this respect, the portal of Ripoll can be compared with the golden mosaics of monuments such as the Palatine Chapel in Palermo or Santa Maria Antiqua in Rome. It may also be related to medieval portals in which gilding and repainting played a decisive role in renewing the monument's prestige and legibility²⁸. Particularly relevant are the portals of Sainte-Foy de Conques, Saint-Maurice d'Angers and Charlieu, together with Notre-Dame du Port in Clermont-Ferrand, Notre-Dame-la-Grande in Poitiers, Saint-Ayoud de Provins, Reims, Senlis and Cluny. All these examples testify to the widespread use of gilding or mordant gilding in monumental sculpture²⁹. These comparisons are important not because they erase the singularity of Ripoll, but because they demonstrate that the Catalan portal participated in a shared visual language in which gold and sacred hierarchy were fundamental to the experience of the monument.

The comparison with the Pórtico de la Gloria is particularly illuminating. Although Santiago employed more profuse gilding and, in some areas, gold leaf of higher prestige, both monuments reveal a sustained concern for the renewal of polychromy and especially of gilded surfaces over time³⁰. In both cases, repainting was not merely restorative but also interpretative: it updated the visual rhetoric of the portal according to changing tastes while preserving the symbolic force of light and splendor. Ripoll differs, however, in its final early modern phase, when the monument received a general black coating rather than a renewed profusion of gold³¹.

This final black layer, initially confused with the soot left by the fire of 1835, has been interpreted after the 2016 restoration as a deliberate repainting, probably intended to imitate black marble³². The hypothesis gains weight from the fact that similar black coatings have also been detected in the portals of Sant Joan de les Abadesses, Besalú and Sant Pere

de Galligants³³. Although the fragmentary state of preservation makes it impossible to determine how widespread this phenomenon was, the evidence suggests that such repainting responded to a broader early modern aesthetic rather than to a purely local anomaly. Once again, the portal of Ripoll emerges not as a static monument but as a sculptural surface repeatedly adapted to new visual expectations.



Fig. 5. Pórtico de la Gloria, Cathedral of Santiago de Compostela, 1168-1188.
Photo: © Laia Cutrina Gallart.

The history of repainting at Ripoll also invites comparison with other monuments where architectural reform and chromatic renewal appear to have gone hand in hand. The Gothic repainting of the portal may have taken place not long before or around the construction of the protecting porticoed atrium between 1280 and 1310, which would have provided additional shelter for the sculpted façade³⁴. A comparable relationship between architectural intervention and chromatic renewal can be observed at the cathedral of Angers, where the medieval polychromy of the portal seems to have been applied after the construction of the protective gallery, and where a later repainting followed the damage caused by a lightning strike in 1617³⁵. Likewise, at Santiago de Compostela, the second major polychrome campaign of the Pórtico de la Gloria has been related to the broader monumental renewal associated with the construction of the Hospital Real³⁶. These parallels suggest that repainting was often bound up with wider strategies of monumental updating, protection and reception.

Ripoll therefore should not be seen merely as an isolated Catalan example, but as part of a trans-regional network of technical knowledge and visual strategies. The circulation of pigments and the

²⁷ Delphine Steyaert and Denis Verret (eds.), *La couleur et la pierre. Polychromie des portails gothiques* (Paris: Picard, 2002), *passim*; Eliana Billi, *Tracce di colore* (Rome: Artemide, 2017), *passim*.

²⁸ Cutrina Gallart, "Els colors del poder," 66.

²⁹ For comparable uses of gilding and mordant gilding in medieval portals along the pilgrimage routes to Santiago, see, among others: Delphine Steyaert and Denis Verret (eds.), *La couleur et la pierre. Polychromie des portails gothiques* (Paris: Picard, 2002), *passim*; Eliana Billi, *Tracce di colore. Policromia di sculture in pietra nell'Italia tardomedievale. Studi e restauri* (Rome: Artemide, 2017), *passim*; and Bénédicte Fillion-Braguet, Nathalie Le Luel and Cécile Mathurin (eds.), *La pierre, la couleur et la restauration: le portail polychromé de la cathédrale d'Angers (XIIe-XXIe siècle). Contribution à l'étude des portails médiévaux en France et en Europe* (Rennes: Presses Universitaires de Rennes, 2024).

³⁰ Miguel Tain Guzmán, "Una historia del color..." in *La restauración del Pórtico de la Gloria* (Madrid: Ministerio de Cultura y Deporte, 2021), 63-120; Mercedes Cortázar and Andrés Sánchez, "Estudio de la secuencia de policromías..." in the same volume, 121-182; Stefanos Kroustallis and Rocío Bruquetas, "La policromía del Maestro Mateo..." in the same volume, 213-234.

³¹ Giráldez and Vendrell, "La portalada de Santa Maria de Ripoll," 180.

³² *Ibid.*

³³ Giráldez and Vendrell, *passim*.

³⁴ Cutrina Gallart, "Una experiencia visual para el peregrino," 152-153, 155, 160.

³⁵ Barbara Franzé and Nathalie Le Luel, "L'expérience de la polychromie, de son invention romane à la relecture moderne: Réflexions autour du Portail de Saint-Maurice d'Angers," in *La pierre, la couleur et la restauration: le portail polychromé de la cathédrale d'Angers (XIIe-XXIe siècle). Contribution à l'étude des portails médiévaux en France et en Europe*, ed. Bénédicte Fillion-Braguet, Nathalie Le Luel and Cécile Mathurin (Rennes: Presses Universitaires de Rennes, 2024), 393.

³⁶ Tain Guzmán, "Una historia del color..." 77.

transmission of artistic recipes, particularly along pilgrimage routes, help explain why monumental portals across Europe shared similar technical solutions and symbolic ambitions³⁷. In Ripoll, this convergence is especially clear: the portal unites local monastic workshop culture, treatise-based technical knowledge, and a broader European language of gilded, luminous, hierarchically structured sacred sculpture.

5. The portico of Agramunt: pigments and trans-regional networks

If Ripoll provides a particularly revealing example of how gilding could reinforce the theological image of Christ as *Lux Mundi*, the portal of Santa Maria d'Agramunt demonstrates with equal clarity how medieval polychromy could articulate hierarchy, status and symbolic ambiguity through the careful selection and renewal of pigments.

Although the inscription carved beneath the sculptural group of the Virgin and Child records the intervention of the weavers of Agramunt in 1283³⁸, the western portal raises a complex chronological problem, inseparable from its position within the historiography of the so-called *School of Lleida*³⁹. This date should not necessarily be applied to the whole portal. The construction of the church began after the granting of the town charter in 1163, and the building was already sufficiently advanced by 1187, when an assembly of *Pau i Treva* was held there⁴⁰. A later document of 1238 refers to the right to administer justice before the doors of the main church; if this reference concerns the western portal, its architectural and sculptural structure may already have been substantially completed by that date⁴¹. In this sense, the inscription of 1283 more securely documents the

commissioning or installation of the Marian group than the execution of the entire sculptural ensemble.

The portal should therefore be understood not as an isolated work dated exclusively to 1283, but as the result of a prolonged late Romanesque artistic process, active between the late twelfth and the thirteenth centuries. Its sculptural language belongs to the broader milieu of the School of Lleida, while the Marian group may be interpreted as a final phase of completion, renewal or visual emphasis. This chronological nuance is especially important for the study of polychromy, since the application and possible renewal of color must be considered in relation to the successive phases of construction, reception and devotional use of the portal.



Fig. 6. Inscription of the weavers of Agramunt, engraved under the base of the Virgin with the child.

Photo: © Arcovaleno Restauro SL & CRBMC – Centre de Restauració de Béns Mobles de Catalunya.

The most important remains of polychromy are preserved in the sculptural group of the Virgin and Child with the Epiphany, in the arch of the doorway and in the first archivolt, that is, in the areas best protected from weathering⁴². Restoration studies have shown that the portal underwent at least two closely successive campaigns of decoration, which explains the presence of superimposed preparation layers, pictorial films and protective coatings⁴³. In this respect, Agramunt constitutes a particularly valuable case for understanding not only the original application of color but also the logic of repainting in medieval monumental sculpture.

One of the most informative stratigraphic samples is AG2, taken from the Epiphany group. Its sequence reveals an unusually rich superimposition of colors and binding systems⁴⁴. The earliest phase consisted of a compact lead-white preparation layer over which a blue pigment (most probably indigo, though possibly mixed with another dark component) was applied in two stages⁴⁵. These two blue applications were separated by a thin organic layer laid in fresco, suggesting that the first campaign of decoration already involved a technically sophisticated chromatic construction. Over this blue phase,

³⁷ Hawthorne and Smith, introduction to Theophilus, *On Divers Arts*; Leturque, *Sensim per partes discuntur*; Cutrina Gallart, "Una experiencia visual para el peregrino," *passim*.

³⁸ Arcovaleno Restauro and CRBMC, *Memòria sobre la intervenció*, 7.

³⁹ On the chronology of the western portal of Santa Maria d'Agramunt and its place within the so-called School of Lleida, see Carme Bergés, "La portada de Santa Maria d'Agramunt," in *Catalunya Romànica*, vol. XXIV: Segrià, Garrigues, Pla d'Urgell, Segarra, Urgell (Barcelona: Enciclopèdia Catalana, 1997), 497–510; Francesc Fité i Llevot, *La portada occidental de Santa Maria d'Agramunt: estudi introductor de la seva interpretació simbòlica dins de les constants de l'escola de Lleida* (Lleida: Diputació Provincial, Institut d'Estudis Ilerdencs, 1984). For the broader sculptural context of the Seu Vella of Lleida and the formation of its early workshops, see Joaquín Yarza Luaces, "Primeros talleres de escultura en la Seu Vella," in *Congrés de la Seu Vella de Lleida. Actes* (Lleida: Pagès Editors, 1991), 39–53; Francesc Fité i Llevot, "La Seu Vella de Lleida," in *Arrels Cristianes. Presència i significació del cristianisme en la història i la societat de Lleida*, vol. II: *Temps de consolidació. La Baixa Edat Mitjana. S. XIII–XV* (Lleida: Pagès Editors, 2008), 397–446.

⁴⁰ The *Pau i Treva* was a Catalan legal and ecclesiastical institution related to the broader Peace and Truce of God movement. It sought to regulate violence and protect ecclesiastical spaces, clergy and non-combatants. In the case of Agramunt, the assembly held in 1187 is used here as evidence that the church was already sufficiently advanced by that date. For the critical edition of the Catalan Peace and Truce texts from the eleventh to the thirteenth centuries, see *Les constitucions de Pau i Treva de Catalunya (segles XI–XIII)*, *Textos Jurídics Catalans. Lleis i Costums*, 9 (Barcelona: Generalitat de Catalunya, Departament de Justícia, 1994).

⁴¹ Bergés, "La portada de Santa Maria d'Agramunt," 497–510.

⁴² Arcovaleno Restauro and CRBMC, *Memòria sobre la intervenció*, 7–8.

⁴³ CRBMC; Calabuig; Giráldez; Vendrell, *Façana de l'Església de Santa Maria d'Agramunt*, 25–26; Arcovaleno Restauro and CRBMC, *Memòria sobre la intervenció*, 8.

⁴⁴ CRBMC; Calabuig; Giráldez; Vendrell, *Façana de l'Església de Santa Maria d'Agramunt*, 33–34.

⁴⁵ *Ibid.*, 33–34.

a later campaign introduced a new brownish-ochre layer and then a bright orange-red film attributed to vermillion, followed by an organic varnish and, finally, by a further whitish protective layer containing lead white used as a siccativ⁴⁶.



Fig. 7. General view of sample AG2 showing the stratigraphy of the polychromy of the Agramunt portal, observed under an optical microscope. Source: © CRBMC (Centre de Restauració de Béns Mobles de Catalunya), *Façana de l'Església de Santa Maria d'Agramunt*, Patrimoni-UB, Barcelona, 2006, p. 34.

This sequence is particularly significant because it demonstrates that repainting in Agramunt did not simply aim to restore deteriorated pigments but also altered the chromatic identity of the figures. Such evidence suggests a deliberate process of visual updating in response to changing aesthetic tastes and, very probably, to changing symbolic codes as well⁴⁷. The replacement of blue by red in the same figure is especially eloquent in this regard.

Agramunt is not an isolated case. Comparable stratigraphic complexity can be observed in other European portals, particularly in monuments of the thirteenth century. Two especially close parallels are the Mère-Dieu portal of Amiens Cathedral, where up to twenty-six superimposed layers have been documented, and the western portal of the church of the Nativity at Rougemont, whose chromatic sequence is strikingly close to that of Agramunt⁴⁸. In all three monuments, vermillion plays a central role in later repaintings, while blue pigments structure earlier phases⁴⁹. The advanced porch of Ferrara Cathedral offers

another relevant comparison: one of its stratigraphic samples reveals a lead-white preparation layer surmounted by azurite and later interventions involving gold and ultramarine, thereby demonstrating a similarly complex logic of chromatic superimposition⁵⁰. On the Iberian Peninsula, the Portada de la Majestad of Toro likewise provides an important parallel, not only for the abundance of repaintings but also for the unequal distribution of chromatic layers according to the symbolic importance of the figures represented⁵¹.

From a material point of view, the portal of Agramunt is remarkable for the refined selection of pigments. Alongside common materials such as carbon black, lead white, red clays and cinnabar, the restorers also identified traces of orpiment and indigo⁵². These findings are particularly significant because they demonstrate that medieval painters did not simply rely on locally available or inexpensive materials, but sought pigments capable of producing more brilliant and prestigious effects. In the case of blue, the use of indigo is especially notable, since it was an imported organic colorant derived from *Indigofera tinctoria* and therefore had to be acquired through long-distance commercial networks⁵³.



Fig. 8. Sculptural group of the Virgin and Child with surviving traces of polychromy, including remains of orpiment and indigo. Photo: © Arcovaleno Restauo SL & CRBMC – Centre de Restauració de Béns Mobles de Catalunya.

⁴⁶ *Ibid.*; Arcovaleno Restauo and CRBMC, *Memòria sobre la intervenció*, 8.

⁴⁷ Cutrina Gallart, "Una experiencia visual para el peregrino: portadas monumentales policromadas en las rutas a Santiago en Cataluña (ss. XII-XIII)," *Ad Limina* 14 (2023): 155-156, 178-180.

⁴⁸ For comparable repainting sequences in monumental portals, see Barbara Franzé and Nathalie Le Luel, "L'expérience de la polychromie, de son invention romane à la relecture moderne: réflexions autour du portail de Saint-Maurice d'Angers," in *La pierre, la couleur et la restauration: le portail polychromé de la cathédrale d'Angers (XIIe-XXIe siècle). Contribution à l'étude des portails médiévaux en France et en Europe*, ed. Bénédicte Fillion-Braguet, Nathalie Le Luel and Cécile Mathurin (Rennes: Presses Universitaires de Rennes, 2024), 383-405, esp. 393. On the stratigraphic complexity of the Marian portal of Amiens and the repainting sequences documented in Rougemont, see also the studies cited in the same volume.

⁴⁹ *Ibid.*, 393; Isabelle Pallot-Frossard, "La polychromie monumentale médiévale: techniques et restaurations," in *La*

couleur et la pierre. Polychromie des portails gothiques, ed. Delphine Steyaert and Denis Verret (Paris: Picard, 2000), 81-89.

⁵⁰ Daniela Pinna, "Casi di policromia nella scultura medievale in Emilia," in *Il colore nel Medioevo: arte, simbolo, tecnica* (Lucca, 2009), 110.

⁵¹ Luis Cañedo, Antonio Illán, José Manso, Javier Navarro and Zulema Véliz, *Restauración de la portada de la Majestad de la Colegiata de Santa María la Mayor de Toro* (Toro, 1996).

⁵² Arcovaleno Restauo and CRBMC, *Memòria sobre la intervenció*, 7-8.

⁵³ Cennino Cennini, *Il libro dell'arte*, ed. Franco Brunello (Vicenza: Neri Pozza, 1988), chap. XCVI; Arcovaleno Restauo and CRBMC, *Memòria sobre la intervenció*, 7-8.

This imported blue sets Agramunt apart from most Catalan Romanesque portals, where lapis lazuli has not been identified, and where blue is otherwise very rare in chemical analyses⁵⁴. At the same time, Agramunt can be compared with a wider European chromatic culture in which blue occupied a privileged place in the representation of the most important figures. Along the pilgrimage routes, lapis lazuli has been documented in monuments such as the Pórtico de la Gloria in Santiago de Compostela, the western portal of Saint-Maurice d'Angers, the south portal of Bourges Cathedral and the lunettes of Sant'Andrea in Vercelli. Even when different blue pigments were employed, the symbolic logic remains comparable. In portals such as Sainte-Foy de Conques, Ferrara, Bourges and Toro, mixtures based on azurite and lead white were used to create similarly precious and visually powerful blue tones⁵⁵.

The comparison with Conques is particularly useful for understanding the symbolic dimension of blue at Agramunt. In the tympanum of Sainte-Foy, blue garments are used not only for divine figures but also for Saint Peter, an abbot and a king⁵⁶. Agramunt follows a similar logic. In the Epiphany group, the AG2 sample revealed that one of the kings originally wore blue before later repainting transformed the garment into red⁵⁷. This suggests that blue, though strongly associated with transcendence, also functioned as a color of status, rank and prestige. Its application was therefore conditioned by the message that the image was meant to transmit.

The same flexibility characterizes the use of red. The later red repainting of the royal garment in the Epiphany scene may be understood as emphasizing earthly authority and royal dignity, especially since cinnabar and red clays were widely used in contexts

of prestige⁵⁸. Yet the portal itself demonstrates that red did not carry a single fixed meaning. In the relief of the angel and the devil beneath the Virgin, the same pigment is used for two figures embodying opposed moral values⁵⁹. Red thus becomes an eloquent example of the contextual nature of medieval color symbolism: the same hue could evoke divine love, infernal force, power, rank or vivid corporeality depending on the figure and narrative setting in which it appeared.



Fig. 9. Detail of the tympanum of the west portal of the abbey church of Sainte-Foy de Conques, France, ca. 1120. Photo: © T rence Le Deschault de Monredon.

This polyvalence of red must also be understood in relation to its technical importance. Red was the most stable and best-preserved of all the primary colors used in monumental sculpture, and for this reason it appears abundantly in portals across Europe⁶⁰. Restoration studies have shown that cinnabar or vermilion are present in such monuments as the P rtico de la Gloria, Ripoll, Agramunt, Ferrara, Angers, Bourges, Strasbourg, Lausanne and Sainte-Foy de Conques, while minium is also frequently attested in Ripoll, Lleida, Conques, Bourges, Strasbourg, Lausanne and Ferrara⁶¹. Agramunt participates fully in this chromatic culture, in which the

⁵⁴ Michel Pastoureau, *Azul. Historia de un color* (Madrid: Alianza Editorial, 2010), *passim*; Cutrina Gallart, "Els colors del poder: la simbologia del div  i l'autorit  a trav s de l'escultura policromada," in *Modelant cultures...* (Bellaterra: Universitat Aut noma de Barcelona, 2022), 63–75.

⁵⁵ For the polychromy of French medieval portals, see Isabelle Pallot-Frossard, "La polychromie monumentale m di vale: techniques et restaurations," in *La couleur et la pierre. Polychromie des portails gothiques*, ed. Delphine Steyaert and Denis Verret (Paris: Picard, 2002), 81–89; see also Barbara Franz  and Nathalie Le Luel, "L'exp rience de la polychromie, de son invention romane   la relecture moderne: r flexions autour du Portail de Saint-Maurice d'Angers," in *La pierre, la couleur et la restauration: le portail polychrom  de la cath drale d'Angers (XIIe–XXIe si cle). Contribution   l' tude des portails m di vaux en France et en Europe*, ed. B n dicte Fillion-Braguet, Nathalie Le Luel and C cile Mathurin (Rennes: Presses Universitaires de Rennes, 2024), 383–405, esp. 393. For Italian monumental portals, see Eliana Billi, *Tracce di colore. Policromia di sculture in pietra nell'Italia tardomedievale. Studi e restauri* (Rome: Artemide, 2017). On the symbolic and social meanings of blue in medieval visual culture, see Michel Pastoureau, *Azul. Historia de un color* (Madrid, 2010); and Laia Cutrina Gallart, "Una experi ncia visual para el peregrino: portadas monumentales policromadas en las rutas a Santiago en Catalu a (ss. XII–XIII)," *Ad Limina* 14 (2023): 147–181.

⁵⁶ Anne Leturque, "Regard sur la polychromie monumentale: l'exemple du tympan peint de Conques (Aveyron, France)," in *La portalada de Ripoll. Creaci , conservaci  i recuperaci * (Roma: IRCVM – Medieval Cultures; Viella, 2018), 131–142.

⁵⁷ CRBMC; Calabuig; Gir ldez; Vendrell, *Fa ana de l'Esgl sia de Santa Maria d'Agramunt*, 33–34.

⁵⁸ Pastoureau and Simonnet, *Breve historia de los colores; Portal, El simbolismo de los colores*; Cutrina Gallart, "Els colors del poder," 63–75.

⁵⁹ Arcovale Restauero and CRBMC, *Mem ria sobre la intervenci *, 8; Cutrina Gallart, "Una experi ncia visual para el peregrino," 162.

⁶⁰ Eliana Billi, *Tracce di colore* (Rome: Artemide, 2017), *passim*; Jorge Rivas L pez, *Policrom as sobre piedra en el contexto de la Europa medieval*, PhD diss. (Madrid: Universidad Complutense de Madrid, 2008), *passim*.

⁶¹ The identification of pigments and painting techniques in the portals discussed here is based on the following studies: Raffaella Rossi-Manaresi, "The Polychromy of the 13th-Century Stone Sculptures in the Fa ade of Ferrara Cathedral," in *ICOM Committee for Conservation, 6th Triennial Meeting, Ottawa* (Paris: ICOM, 1981), 81/5/3–1–81/5/3–13; Rossi-Manaresi, "Considerazioni tecniche sulla scultura monumentale policromata, romanica e gotica," *Bollettino d'Arte* 41 (1985): 173–186; Rossi-Manaresi, "Observations   propos de la polychromie de la sculpture monumentale romane et gothique," in *La couleur et la pierre. Polychromie des portails gothiques*, ed. Delphine Steyaert and Denis Verret (Paris: Picard, 2002), 57–64; Isabelle Pallot-Frossard; Barbara Franz  and Nathalie Le Luel; Anne Leturque on the tympanum of Conques; Eliana Billi for Italian monumental sculpture; and the restoration reports and technical studies cited in this article for the Iberian examples (Santiago de Compostela, Ripoll, Agramunt and Lleida).

predominance of red responded both to technical durability and to the wide symbolic range that the color could express⁶².

The use of green in Agramunt adds another important comparative dimension. The portal preserves traces of malachite, especially in the books held by figures in the archivolt, making it one of the rare Catalan portals where this pigment can still be identified with some certainty⁶³. Here again the comparisons are revealing: malachite is also documented in portals such as Sainte-Foy de Conques, Bourges, Lausanne, Ferrara and Venice⁶⁴. Since malachite was relatively accessible in the Pyrenean region, its presence in both Catalan and southern French monuments points to a shared material horizon, reinforced by trans-Pyrenean mobility and trade⁶⁵.



Fig. 10. Traces of green polychromy on the portal of Santa Maria d'Agramunt, likely corresponding to malachite.

Photo: © Arcovaleno Restauro SL & CRBMC – Centre de Restauració de Béns Mobles de Catalunya.

Agramunt is equally significant for the study of yellow and gold-like effects. Unlike Ripoll, where the main emphasis was placed on false gilding and later mordant gilding, Agramunt relied on orpiment in order to create brilliant yellow surfaces, especially in the crowns of the Magi, the wings of angels and the Marian group⁶⁶. This choice reflects not only a knowledge of multiple gilding techniques but also a sophisticated understanding of the relationship between cost, danger and visual effect. Orpiment, though toxic and more difficult to handle, produced refined and luminous results and was also common in Catalan panel painting⁶⁷. The portal thus again illustrates the continuity of technical procedures across different media.

The technical complexity of Agramunt extends as well to its binding media. The analyses suggest the use of both oil and tempera, and in at least one early blue phase the evidence points specifically to

egg tempera⁶⁸. This combination aligns Agramunt with other European monuments where mixed binding systems have been documented. Proteinaceous media mixed with lead white have been identified in Lausanne, San Marco in Venice and Bourges, whereas oil (sometimes mixed with small quantities of animal glue) has been detected at Ripoll, Agramunt, the Pórtico de la Gloria, Chartres, Ferrara, Strasbourg and Bourges⁶⁹. Such findings confirm that the painters of monumental portals adapted their technical procedures according to the pigment, the support and the desired visual effect, rather than adhering to a single fixed method.

Finally, the repainting history of Agramunt reinforces the idea that monumental portals were repeatedly renewed because their color was essential both aesthetically and didactically. The investment in precious pigments, protective coatings and repeated chromatic updating must be understood in relation to the function of these monuments as points of visual attraction for the faithful and, often, for pilgrims⁷⁰. As in other great portals of the medieval routes, repainting did not merely restore worn surfaces: it reactivated the portal as a luminous and legible image, capable of transmitting doctrine through a vivid combination of sculpture and color.

Agramunt therefore stands as one of the clearest examples of how medieval monumental sculpture cannot be fully understood without its polychromy. Its pigments, repaintings and symbolic choices reveal a portal conceived not simply as carved stone, but as a mutable and highly articulated visual program in which technique and symbolism were inseparable.

6. Polychromy and the visual experience of medieval portals

The analysis of the portals of Ripoll and Agramunt demonstrates that the polychromy of monumental sculpture in the Catalan Counties cannot be understood exclusively through the identification of pigments or painting techniques. The surviving chromatic vestiges indicate that color formed part of a broader visual system in which materiality, iconography and viewer perception operated simultaneously.

In both monuments, the application of color contributed to the establishment of visual hierarchies within the sculptural program. At Ripoll, the concentration of gilding around the figure of Christ reinforced the theological interpretation of the portal as a manifestation of Christ as *Lux Mundi*. The reflective surface of the gilded halo, activated by natural light, visually distinguished the central figure from the surrounding narrative scenes and directed the spectator's gaze towards the focal point of the composition⁷¹.

⁶² Cutrina Gallart, "Una experiencia visual para el peregrino," 170–175.

⁶³ Arcovaleno Restauro and CRBMC, *Memòria sobre la intervenció*, 8.

⁶⁴ See the bibliography cited in n. 60.

⁶⁵ Anne Leturque, *Sensim per partes discuntur quaelibet artes...*, PhD diss. (Montpellier / Bellaterra, 2015); Hawthorne and Smith, introduction to Theophilus, *On Divers Arts*; Cutrina Gallart, "Una experiencia visual para el peregrino," *passim*.

⁶⁶ Arcovaleno Restauro and CRBMC, *Memòria sobre la intervenció*, 7–8.

⁶⁷ Cennini, *Il libro dell'arte*, chap. XCVI.

⁶⁸ CRBMC; Calabuig; Giráldez; Vendrell, *Façana de l'Església de Santa Maria d'Agramunt*, 33–34.

⁶⁹ See also the studies cited in n. 60.

⁷⁰ Cutrina Gallart, "Una experiencia visual para el peregrino," *passim*; Miguel Tain Guzmán, "Una historia del color..." in *La restauración del Pórtico de la Gloria* (Madrid: Ministerio de Cultura y Deporte, 2021), 63–120.

⁷¹ On the symbolic role of gilding and the relationship between light and visual hierarchy in medieval monumental sculpture, see: Willibald Sauerländer, "Quand les statues étaient blanches: discussion au sujet de la polychromie," in *La couleur et la pierre: polychromie des portails gothiques*, proceedings

At Agramunt, however, the chromatic evidence suggests a more complex interaction between color and narrative structure. The stratigraphic analyses carried out during restoration have revealed a sequence of superimposed layers that modified the chromatic appearance of several figures over time. Such repainting campaigns did not simply restore deteriorated pigments but could also alter the visual emphasis of the sculptural ensemble. The replacement of certain colors by others within the same figure indicates that the portal's appearance was periodically updated in response to changing aesthetic sensibilities and devotional expectations⁷².

These observations highlight an essential characteristic of medieval polychromy: color was not a static component of sculpture but a dynamic element capable of transformation across successive historical phases. Monumental portals should therefore be understood as surfaces subject to continual visual renewal, whose appearance could change through successive repainting campaigns.

At the same time, the comparison between Ripoll and Agramunt underscores the importance of considering the perceptual dimension of color. Romanesque portals occupied a liminal position between the exterior space of the faithful and the sacred interior of the church, functioning as visually prominent points of transition. Their sculptural and chromatic richness formed part of what Meyer Schapiro described as the *speaking façade*, a visual system through which the Church communicated complex theological messages to the faithful⁷³.



Fig. 11. The angel and the devil facing each other, under the relief of the Virgin. Photo: © Arcovaleno Restauro SL & CRBMC – Centre de Restauració de Béns Mobles de Catalunya.

Within this context, color played a decisive role in reinforcing the communicative potential of sculpture. Medieval viewers approaching the church would have encountered façades animated by vivid pigments and metallic reflections rather than the monochrome

stone surfaces visible today. These chromatic contrasts enhanced the legibility of the sculptural narratives and intensified their emotional impact, transforming the portal into a powerful instrument of visual persuasion.

Scholarly studies have increasingly emphasized that the polychromy of medieval sculpture should be interpreted not as a secondary decorative addition but as an integral component of the artistic conception of the monument, a notion that resonates with medieval theories linking beauty, color and luminosity⁷⁴. The combination of sculpture, color and light effects created a unified visual environment capable of guiding the viewer's gaze and structuring the interpretation of the iconographic program⁷⁵.

The comparison with other European portals further confirms that these strategies formed part of a shared artistic culture. Similar pigments, gilding techniques and pictorial procedures are documented in numerous monuments situated along pilgrimage routes and other networks of artistic exchange. The circulation of pigments, the transmission of artistic treatises and the mobility of workshops facilitated the diffusion of technical knowledge across different regions of medieval Europe⁷⁶.

In this broader context, the portals of Ripoll and Agramunt should be understood as participants in a transregional artistic landscape rather than isolated monuments. Their polychromy reflects both local workshop traditions and wider European practices that shaped the appearance of monumental sculpture throughout the Middle Ages.

Ultimately, the study of these portals demonstrates that the meaning of Romanesque monumental sculpture cannot be fully understood without considering its original chromatic dimension. Sculpture and color functioned together as elements of a single visual language through which theological ideas, artistic technique and viewer perception were inseparably intertwined.

7. Conclusions

The analysis of the portals of Santa Maria de Ripoll and Santa Maria d'Agramunt demonstrates that the study of medieval monumental sculpture cannot be separated from its chromatic dimension. Although the surviving remains of color are often fragmentary, restoration analyses and scientific studies clearly indicate that these monuments were originally conceived as fully polychrome ensembles. Sculpture, pigment and gilding formed

of the Amiens conference (12-14 October 2000), Paris, 2000, 27-34.

⁷² On the stratigraphic complexity of medieval polychromy and its successive repainting campaigns, see: Raffaella Rossi-Manaresi, "Observations à propos de la polychromie de la sculpture monumentale romane et gothique," in *La couleur et la pierre: polychromie des portails gothiques*, Amiens, 2000, 57-64.

⁷³ Meyer Schapiro, *Romanesque Architectural Sculpture: The Charles Eliot Norton Lectures*, Chicago: University of Chicago Press, 2006, 29.

⁷⁴ On medieval aesthetic theories concerning the relationship between beauty, color and light, see: Władysław Tatarkiewicz, *History of Aesthetics*, vol. II: *Medieval Aesthetics* (The Hague-Paris: Mouton, 1970); Edgar de Bruyne, *Études d'esthétique médiévale*, 3 vols. (Bruges: De Tempel, 1946); Umberto Eco, *Art and Beauty in the Middle Ages* (New Haven: Yale University Press, 1986).

⁷⁵ On the relationship between polychromy, iconographic interpretation and visual reception in medieval sculpture, see: Laia Cutrina Gallart, "A Hidden Splendor: The Color of Medieval Cloisters in 12th and 13th-Century Catalonia," *Conservar Patrimoni* 49 (2025): 208-222.

⁷⁶ On the circulation of pigments, artistic techniques and workshops within pilgrimage routes, see: Laia Cutrina Gallart, "Una experiencia visual para el peregrino: portadas monumentales policromadas en las rutas a Santiago en Cataluña (ss. XII-XIII)," *Ad Limina* 14 (2023): 147-155.

an integrated visual system that fundamentally shaped both the appearance and the meaning of the portal.

The case of Ripoll illustrates particularly well how polychromy could reinforce the theological interpretation of a sculptural program. The concentration of gilding around the figure of Christ created a luminous focal point that visually articulated the idea of Christ as *Lux Mundi*. Through the interaction between sculptural form, reflective surfaces and natural light, the portal produced a hierarchical visual structure in which the central figure acquired both symbolic and perceptual prominence. The technical evidence of false gilding and later mordant gilding also reveals the close relationship between sculptural polychromy and the broader technical culture of medieval painting.

The portal of Agramunt, on the other hand, highlights the complexity of chromatic strategies within monumental sculpture. The stratigraphic analyses carried out during restoration have revealed multiple superimposed layers of pigments and protective coatings that significantly altered the appearance of the figures over time. These repainting campaigns demonstrate that polychromy was not a fixed or immutable element of sculpture, but rather a dynamic component capable of transformation according to changing aesthetic preferences and devotional contexts.

At the same time, the pigments identified at Agramunt reveal the existence of broader networks of artistic exchange. The presence of imported materials such as indigo and the use of pigments also documented in monuments across France, Italy and the Iberian Peninsula situate the Catalan portals within a wider European artistic landscape. The circulation of pigments, artistic treatises and workshop practices contributed to the diffusion of similar technical solutions and chromatic conventions across different regions of medieval Europe.

The comparison between Ripoll and Agramunt therefore illustrates two complementary aspects of medieval polychromy. While Ripoll emphasizes the theological and luminous symbolism of gilding, Agramunt demonstrates how the selection and renewal of pigments could articulate status, narrative meaning and visual hierarchy within the sculptural ensemble. In both cases, color functioned not merely as decoration but as a structural element of the visual program.

Finally, the study of these monuments confirms the importance of considering the perceptual experience of medieval viewers. Romanesque portals were designed as architectural thresholds that mediated between the exterior world and the sacred interior of the church. Their sculptural programs were originally animated by vivid pigments and metallic reflections that enhanced the legibility of the imagery and intensified its visual impact. When viewed in this original chromatic state, the portal would have appeared not as bare stone but as a luminous and vibrant façade capable of guiding the viewer's gaze and reinforcing the theological messages embedded in the sculpture.

Taking this chromatic dimension into account allows Romanesque portals to be reinterpreted not merely as stone carvings, but as carefully

orchestrated visual environments in which sculpture, polychromy and chromatic symbolism operated together. The portals of Ripoll and Agramunt thus offer compelling evidence that polychromy was central to the conception, reception and continued transformation of monumental sculpture in the medieval Catalan Counties.

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