

Colored materials as markers of meaning: the polymateriality and the concept of 'hierarchy' in the Middle Ages

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Abstract: From Antiquity, medieval architects and sculptors inherited various technical practices to create polychrome buildings and artworks, including polymateriality, the free and easy use of combining two or more materials of different colors, independent either by nature or expressive capabilities, to address a significant effect on the perception of architecture and architectural, liturgical, and in the round sculpture, both in stone, wood, or metal. Assuming that the use of a specific material in an artifact was never accidental but determined by conscious purposes, this paper will attempt to explain the necessity and intentionality of polymateriality and the concept of the colour-based hierarchy in the context of the Middle Ages.

Keywords: Polymateriality; Medieval colors; Precious colors; Lapis lazuli; Color symbolism.

ES Los materiales coloreados como marcadores de significado: la polimaterialidad en la Edad Media

Resumen: De la Antigüedad, los arquitectos y escultores medievales heredaron diversas prácticas técnicas para crear edificios y obras de arte policromados, entre ellas la polimaterialidad, el uso libre y fácil de combinar dos o más materiales de diferentes colores, independientes por naturaleza o por capacidades expresivas, para abordar un efecto significativo en la percepción de la arquitectura y la escultura arquitectónica, litúrgica y en bulto redondo, tanto en piedra como en madera o metal. Asumiendo que el uso de un material específico en un artefacto nunca fue accidental sino determinado por propósitos conscientes, este artículo intentará explicar la necesidad e intencionalidad de la polimaterialidad y el concepto de la jerarquía basada en el color en el contexto de la Edad Media.

Palabras clave: Polimaterialidad; Colores medievales; Colores preciosos; Lapislázuli; Simbolismo del color.

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1. Introduction

The Middle Ages continued and strengthened the relationship between form and color that characterized temples and sculptures in Antiquity. From Antiquity, medieval architects and sculptors inherited various technical practices to create polychrome buildings and artworks, including polymateriality. We can define polymateriality as the free and easy use of combining two or more materials of different colors, independent either by nature or expressive capabilities, to address a significant effect on the perception of architecture, and architectural, liturgical,

and in-the-round sculpture, both in stone, wood, or metal. Assuming that the use of a specific material in an artwork was never accidental but determined by conscious purposes, this paper will attempt to explain the necessity and intentionality of polymateriality in the context of the Middle Ages.

Based on the way the different materials are combined, we can list at least three kinds of polymateriality¹: by superimposition, when one or more materials are hidden or at least obscured; by insertion, when the materials are all visible but none of them can compromise the shape and the identity of the work if removed; by juxtaposition,

¹ Grazia Maria Fachechi, "Varietas delectat. Towards a classification of mixed-media sculpture in the Middle Ages". *Peregrinations: Journal of Medieval Art & Architecture*, III, 2 (2011): 162-177.

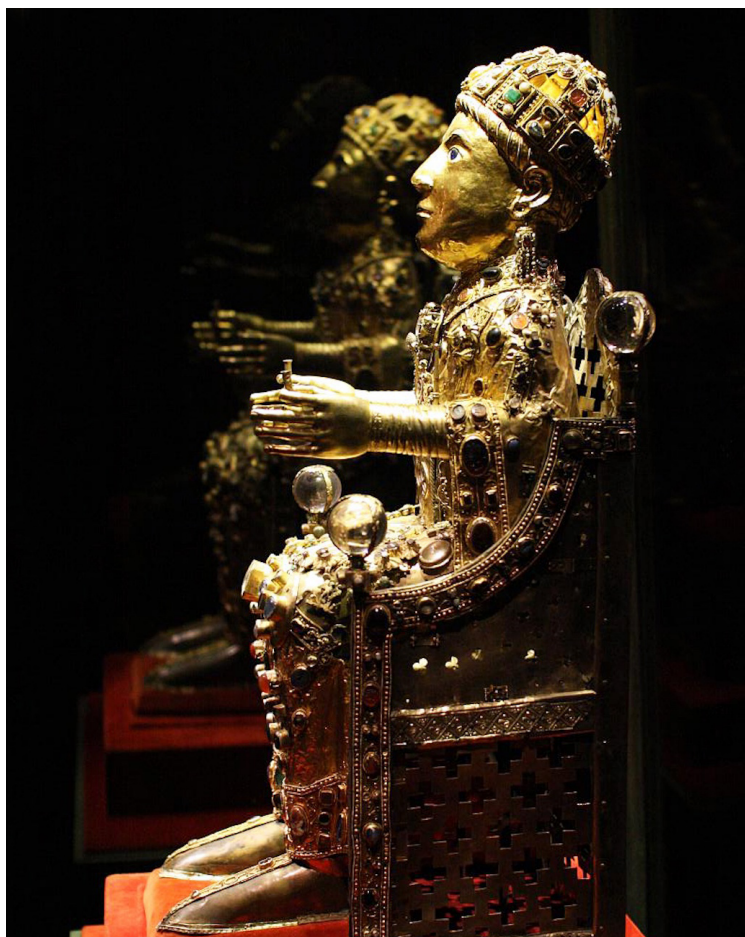


Fig. 1. Conques-en-Rouergue, Treasury of the Abbey, reliquary statue of Sainte-Foy.
Sources: Wikipedia Commons

when various materials are all in full view, and each of them has a role in the description of the image. Then, there is a fourth category that combines the previous categories.

2. Why polymateriality?

In any case, the first intentional reason for using polymateriality is to make something more admirable and to dignify it with precious materials, often reusing and hoarding ancient objects. In fact, in the medieval imagination, there was the belief that the richness of the materials, frequently added to artworks over the centuries, could increase the effectiveness of images with high devotional content. This is the case, for example, of the reliquary statue of Sainte-Foy a Conques-en-Rouergue (Treasury of the Abbey), near which the sick crowded hoping for healing, and whose Carolingian basic structure, the gold and gilded silver cover placed on a wooden core, was gradually enriched with inserts in various materials for about two centuries (Fig. 1). Polymateriality gave works like this an aura of sacredness by interacting with liturgical performativity and reacting to natural light and the light of candles². The Church's use of precious stones and metals was linked to its self-promotion in the eyes of the faithful, being a clear sign of its economic and political power.

One can say that polymateriality has a number of other aims, as much as polychromy, such as ornating

a work in the name of variety, heightening shapes and details, making figures and scenes represented more realistic, and conveying symbolic meanings. But, concerning the latter goal, polymateriality can ensure something more, which is not immediately understandable in polychrome works: to convey the meaning not just of a specific color but also of a particular material of that color. Let's try to explain how it is possible to grasp the meaning of a material and its color through their connection to the iconography.

3. The Herimannkreuz

An interesting object that falls in the fourth category of polymateriality is the Herimannkreuz (Erbischöfliches Diözesanmuseum, Cologne, c. 1056), so-called because commissioned by the Archbishop Herimann of Cologne, grandson of Otto II, as affirms the inscription legible on the upper part of the cross *Herimannus Arciepiscopus me fieri iussit*³. The Herimannkreuz (41 x 28 cm) is wood covered by gilt copper and bronze (polimateriality by superimposition) and presents examples of insertions of precious stones, one of which is a piece of rock crystal at the juncture of the cross on the verso (polimateriality by insertion); on the recto is a carved lapis lazuli head where Christ's should be, embedded in a cranium of bronze (polimateriality by juxtaposition) (Figg. 2-4). The piece of lapis lazuli is a tiny Roman head from the first century,

² Ivan Foletti, *Sainte Foy révélée: la plus ancienne statue médiévale à Conques* (Brno: Masaryk University Press, 2022).

³ Ulrike Surmann, *Das Kreuz Herimanns und Ida* (Köln: Joachim M. Plotzek, 1999).

representing a female face. The reuse of ancient gems in medieval liturgical objects produced for high-level figures is not uncommon and seems to reflect the client's social status. Specifically, the insertion of a rare and precious piece from Antiquity at the intersection of the arms of a cross was not an unusual practice in the production of Ottonian crosses with gemstones and had the function of rendering more precious, ennobling, underlining, and drawing attention to the point which is symbolically most important to the work. Two more examples may be cited, the Heinrichskreuz (Staatliches Museum Preussischer Kulturbesitz, Kunstgewerbemuseum, Berlin, first half of the eleventh century)⁴ and the Cross of Lothar II (Domschatzkammer, Aachen, c. 1000)⁵. In neither, the head inserted (the first is a young follower of Bacchus, and the second is the emperor Augustus) has no direct connection to the crucifix. In the Herimannkreuz the head also lacks a contemporary connection to the crucifix, or even Christian symbolism. Still, the iconographic irrelevance is countered by the symbolic solid congruity of the material from which it is made, its color, and its precious character⁶.



Fig. 2. Cologne, Erzbischöfliches Diözesanmuseum, Herimannkreuz, recto. Source: Wikipedia Commons



Fig. 3. Cologne, Erzbischöfliches Diözesanmuseum, Herimannkreuz, verso. Source: Wikipedia Commons



Fig. 4. Cologne, Erzbischöfliches Diözesanmuseum, Herimannkreuz, detail. Source: Wikipedia Commons

- ⁴ Lothar Lambacher, "Die Heinrichsgaben – Reliquienkreuz". In Meles, Brigitte (ed.). *Der Basler Münsterschatz. Historisches Museum Basel*. Basel: Christoph Merian Verlag, 2001: 19-24.
- ⁵ Theo Jülich, "Gemmenkreuze. Die Farbigkeit ihres Edelsteinbesatzes bis zum 12. Jahrhundert". In *Aachener Kunstblätter* 54-55 (1986-1987): 159-170.
- ⁶ Norberto Gramaccini, Thomas Raff, "Iconologia delle materie". In Enrico Castelnuovo, Giuseppe Sergi, (eds), *Arti e storia nel Medioevo*, II, *Del costruire: tecniche, artisti, artigiani, committenti* (Torino: Einaudi, 2003): 395-416.

4. The blue colour and its meanings

The decision that oversaw the choices of materials used in medieval artworks was based on multiple criteria. Among these was their economic value, often linked to the greater rarity of the materials or to the lower availability on the market. Alongside the economic value, there was also the symbolic value attributed to materials from a symbolism often rooted in references found in the Holy Scriptures, in exegetical, theological, encyclopedic, or other texts.

In the Middle Ages, every material and color had a semantic meaning; consequently, we can try to understand what they meant to be in specific contexts using the iconology method.

The analysis of ancient and medieval sources and gemological studies agree in believing that at least until the 12th century the precious lapis lazuli⁷ was called *saphirus*, a word that didn't indicate therefore the gem that today we call sapphire (blue corundum), instead called *iacinthus*⁸. In describing the stone called *saphirus*, ancient and medieval authors refer to the blue color, the golden glow, the opacity, and the connection with the land of the Medes.

To the *saphyrus*, a word used to indicate both the chrononym and the pigment (color and material were intimately interconnected in the Middle Ages), biblical exegesis and medieval lapidaries connected specific symbolic meanings, which were influenced by the ancient and pre-Christian tradition, and, obviously, the role it had in the Bible, where it is mentioned several times in connection with a variety of theological notions: sky, God, the celestial Jerusalem. All these connections became, so to speak, permanent iconographic attributes of the stone⁹.

Let's see more specifically. In the Book of Exodus, God is envisioned with his feet resting on a slab of sapphire, whose color recalls the Heavens, and the

sapphire is one of the stones found on the breastplate of the High Priest Aaron (24.10, 28.18, 39.11); in the Song of Songs (5.14) the body of the bridegroom, later interpreted as Christ, is described as being composed of ivory and sapphire; Ezekiel (1.26, 10.1, 28.13) described the throne of God as being made of sapphire¹⁰. Later commentators, such as Origen and Saint Jerome, explored the symbolism of the sapphire and its connection with the color of the Heavens, making it one of the signs of Heavenly Life promised by God, in conformity with the contents of Paul's letter to the Philippians (3.20). Even Gregory the Great contrasted the sapphire, the symbol of the Heavenly Sphere with the sardonic, the symbol of the Earthly Sphere.

Therefore, the lapis lazuli set in the head of the crucifix of Herimannkreuz, noteworthy for its blue color against a gold background, could not but point to the Heavenly Sphere in which the Heavenly Father lives, and this symbolizes his closeness to the dying Christ, as a chromatic sign of the divine nature of Jesus, in conformity with the second article of the *Credo*¹¹. In this case, the polimateric quality is not only intended for aesthetic ends but is also tied to the transmission of symbolism. Its implications must have arrived with force and clarity by taking such an extraordinary form because the work of God is characterized most exactly by those *admirabiles mixturae*¹², which amazed and disturbed but also induced profound reflection. The "game" of using and mixing materials and colors according to the expressive semantic meanings and values they produced extended beyond the Middle Ages.

This success was due to the effectiveness of mixed media. Ultimately, mixed media in the art of the Middle Ages went beyond a collection of lovely materials intermingled for aesthetic effect; they drew upon deep sources of media symbolism, significantly enhancing their meanings and functions. But there is more.

Like all the works made with various materials, textures, and colors, the lapis lazuli (and other

⁷ Lapis lazuli was considered one of the most precious gems since Antiquity; see Jeffrey Spier. *Ancient gems and finger rings*. Los Angeles: Getty Museum Publications, 1992. On the natural history of lapis lazuli, see Catherine Schmidt et al. "Characterization of lapis lazuli pigments using a multitechnique analytical approach: implication for identification and geological provenancing", *Anal. Chem.*, 81 (2009): 8513-8518. About also other blue pigments: François Delamare, *Bleus en poudres. De l'Art à l'Industrie 5000 ans d'innovations* (Paris: Presses de l'École des mines de Paris, 2007); Jana Sanyova, *Lapise et azurite, minerais bleu utilisés pour la fabrication de pigments*. In Jacques Toussaint (ed.), *Regards sur le Bleu. Turquoise, saphir, lapis et autres minéraux bleus dans l'art et l'archéologie* (Namur: San Namur, 2011): 162-183; Carlo Galliano Lalli, Federica Innocenti, "Appunti sulle caratteristiche chimico-fisiche dell'azzurrite e del lapislazzuli". *OPD Restauro*, 26 (2014): 78-82; Maria Sframeli et al. (eds.), *Lapislazzuli. Magia del blu* (Livorno: Sillabe, 2015).

⁸ Alberto Virdis, "Color in Suger's Saint-Denis: Matter and Lights". *Convivium* 2021: 79-94; Alberto Virdis, "Suger di Saint-Denis e la materia saphirorum: un'indagine fra crononimi medievali, gemme e pigmenti". *Spolia. Annual Journal of Medieval Studies*, XVII, 7 (2021): 1-49.

⁹ On the interaction between theoretical knowledge and material choices in the arts of the Middle Ages, see: Stefania Gerivini. "Christus crystallus: rock crystal, theology and materiality in the medieval West". In Robinson, James et al. (eds.), *Matter of Faith: an interdisciplinary Study of Relics and Relic Veneration in the Medieval Period*. London: British Museum Research Publications, 2014. On the relationship between material aspects and symbolic values in ancient Greece see: Harikleia Breccoulaki. "Precious colours in ancient greek polychromy and painting: material aspects and symbolic values". *Revue archéologique*, 1 (2014): 3-35.

¹⁰ See also: Ap. 21.19, Is. 54.11, Tb. 13.16, Jb. 28.6, 29.16, Lam. 4.7.
¹¹ Erika Zwierlein-Diehl. "Das Lapislazuli-Köpfchen am Herimann-Kreuz". In Froning, Heide et al. (eds.), *Kotinos. Festschrift für Erika Simon*, Mainz am Rhein: Philipp von Zabern, 1992: 386-393.

¹² See Bernard de Clairvaux (*Sermones in vigilia nativitatibus domini, sermo III*, PL 183, 98B), who observed that God has wanted to mix and combine things so different from each other: *Et mane, inquit, videbitis gloriam ejus. O mane! o dies, quae melior es in atriis Domini super millia, quando erit mensis ex mense, et Sabbatum ex Sabbato, cum splendor lucis et fervor charitatis usque in altissima illa magnalia terrarum incolae illustrabit! Quis de te cogitare, nedum aliquid praesumat recitare? Interim tamen aedificemus, fratres, fidem nostram, ut si mirabilia illa, quae nobis reservantur, videre non possumus, saltem mirabilia quae propter nos in terris facta sunt, aliquantulum contemplemur. Tria opera, tres mixturas fecit omnipotens illa Majestas in assumptione nostrae carnis, ita singulariter mirabilia, et mirabiliter singularia, ut talia nec facta sint, nec facienda sint amplius super terram. Conjuncta quippe sunt ad invicem Deus et homo, mater et virgo, fides et cor humanum. Admirabiles istae mixturae, et omni miraculo mirabilius, quomodo tam diversa, tamque divisa ab invicem, invicem potuerunt conjungi*. In reference to various theories of "Wonder" in the Middle Ages, see Caroline Walker Bynum, "Wonder". *American Historical Review*, 102/1 (1997): 1-17, and William Tronzo, "Mixed Media -Admirabiles mixturae". In Arturo Calzona et al. (eds.), *Immagine e ideologia: studi in onore di Arturo Carlo Quintavalle* (Milano: Mondadori Electa, 2007): 207-212.



Fig. 5. Modena, Cathedral, choir screen, Christ washing the feet of the Apostles. Source: Wikipedia Commons

colored stones) in the Herimannkreuz, encourages a holistic approach to the cross. Moreover, the interaction between lapis lazuli and goldsmith's work produces a set of visual contrasts between reflective and opaque surfaces, between gilding and color etc., drawing the viewer's attention to the work's materiality. This unresolved visual tension, in turn, reinforces the Christological and eschatological messages conveyed by these materials because they physically manifest and replicate the enigmatic coexistence of the divine nature and the human nature of Christ¹³.

Therefore, on the one hand, the Herimannkreuz gives a series of iconographic messages based on preordained metaphorical meanings of lapis lazuli; on the other hand, his presence offers the viewer the opportunity to experience the enigmas of the Christian faith visually.

In a famous passage from *De rebus in administratione sua gestis* (XXXIII), Suger describes the so-called *Crista*¹⁴, a precious object of gold and gems dating back to the Carolingian period, which was part of the liturgical furnishings of Saint-Denis abbey church. Suger celebrates its beauty, specifically

referring to the *speciositas* of the polychrome gems, and says that through the meditation he performed in front of it, he managed to rise "analogically" from the earthly world towards the spiritual one. It could therefore be concluded that the colored stone had a spiritual value and an anagogical function; it transmitted symbolic meanings and triggered a meditative process that led the viewer to a deeper reflection, which allowed him to rise from the earthly world toward the divine one, *per visibilia ad invisibilia, per materialia ad immaterialia, per sensibilia ad intellectualia*¹⁵.

If this is true for the lapis lazuli, it should be valid for many other precious materials, as well: they all had extraordinary visual properties, material and market value given their non-immediate availability, and symbolic and spiritual value.

5. The hierarchical use of colors

This is evident when analysing a work in which different materials, but of the same color, have been used. To exemplify this concept, let's leave the polymateric

¹³ Stefania Gerevini, "Christus crystallus: rock crystal, theology and materiality in the medieval West". In James Robinson et al. (eds.), *Matter of Faith: an interdisciplinary Study of Relics and Relic Veneration in the Medieval Period* (London: British Museum Research Publications, 2014): 97.

¹⁴ Josiane Barbier, "Nouvelles remarques sur l'«Escrain de Charlemagne»". *Bulletin de la société Nationale des Antiquaires de France* (1995): 254-265.

¹⁵ Unde, cum ex dilectione decoris domus Dei aliquando multicolor gemmarum speciositas ab extrinsecis me curet devocaret, sanctorum etiam diversitatem virtutum, de materialibus ad immaterialia transferendo, honesta meditatio insistere persuaderet, videor videre me quasi sub aliqua extranea orbis terrarum plaga, quae nec tota sit in terrarum faece, nec tota in celi puritate demorari, ab hac etiam inferiori ad illam superiorem anagogico more Deo donante posse transferri. See also Werner Beierwalters, *Eriugena. I fondamenti del suo pensiero*, (Milano: Vita e Pensiero, 1988): 131-179.

artifacts and see what happens with polychrome stone sculpture, and let's focus on blue.

Sometimes, analysing some medieval stone sculptures¹⁶, scientists found both lapis lazuli and azurite, the other blue stone *par excellence*, however far less expensive and valuable, and this is very interesting if we assume that they were used in the same painting campaign.

That is the case of the choir screen of the Cathedral of Modena, sculpted in the last quarter of the XII century with scenes from the Passion of Christ; the background and the clothes of the Apostles are painted with azurite, while the mantle of Christ is painted in lapis lazuli (Fig. 5).

In the external lunettes of the Baptistery of Parma, sculpted by Benedetto Antelami at the beginning of the XIII century, they found azurite in the south portal, with the image of the Tree of Life, and in the north portal, with the Adoration of the Magi and the Dream of Joseph, while in the west portal, which represents Christ and the symbols of the Passion, they found only lapis lazuli as blue pigment, painted on a black preparatory layer. Even though the polychromy of the lunette of the central portal of the Cathedral of Genoa, sculpted in the first quarter of the XIII century, is now almost entirely lost, we know for sure that the background of the entire surface was covered by azurite, while only the background of the Mandorla, which contains Christ in Majesty, was in lapis lazuli.

That might suggest that when artists had the option of using both pigments, lapis lazuli and azurite, they definitively preferred to use the most precious of the two to paint only the most important figures or details. This *modus operandi* can be proved even in medieval paintings and miniatures. For example, in the Book of Kells, the precious *aurum pigmentum* (orpiment) is used only for the veil of the Virgin and the hair of Christ and the angels, while the cheaper yellow ochre is used for the evangelists¹⁷. In other words, if the intrinsic material value added more significance to the inherent symbolic meaning of color, we can conclude that in the Middle Ages there was a sort of taxonomy of materials that determined a "hierarchical use" of colors, based on the scale of value of the figures and scenes, which not only responded to economic strategy, but also, and above all, to communicative and significant strategies¹⁸.

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¹⁶ To find references about the monuments mentioned, see: Eliana Billi, *Tracce di colore. Policromia di sculture in pietra nell'Italia tardomedievale. Studi e restauri* (Roma: Artemide, 2017).

¹⁷ Grazia Maria Fachechi, "Giallo come oro, giallo versus oro: usi e significati di un colore ambiguo e polisemico nei manoscritti medievali". In Giordana Mariani Canova, Alessandra Perriccioli Saggese (eds.), *Libri miniati per la chiesa, per la città, per la corte in Europa: lavori in corso* (Padova: Il Poligrafo, 2014): 51-63.

¹⁸ To find out more, see: Grazia Maria Fachechi and Alberto Virdis, "Visible Materials, Invisible Meanings. Colour-based Hierarchies in the Middle Ages". *Conservar Património* (2025), 49, 13-27, <https://doi.org/10.14568/cp36110>.

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