Minor Arts Becoming Major: The Classical in Dialogue with the Non-Classical at the Origins of the Art of Stained Glass

Artes menores convertidas en mayores. La herencia clásica en diálogo con otras en los orígenes del arte de la vidriera

Alberto Virdis
Centre for Early Medieval Studies, Masaryk University, Brno
info@earlymedievalstudies.com
alberto.virdis@gmail.com
ORCID ID: 0000-0003-2862-5670
https://doi.org/10.61023/codexaq.2024.40.002

Abstract

The distinction between "major" and "minor" arts has its source within Renaissance humanism. In the fifteenth century, Filarete identified the decadence of the architecture of his time in the transalpine trend of building monuments in the form of thuribles and tabernacles, imitating the works of goldsmiths on a larger scale. Therefore, since their first delineation "minor arts" have included goldsmithing and other related art forms. Despite its monumental dimensions, stained glass soon joined this category in the post-medieval literature on art. As confirmed by recent research, the aesthetics and techniques of the arts of goldsmithing, enameling, and stained glass turned out to be deeply intertwined. This article investigates the artistic intersections that underpinned the emergence of stained-glass windows in the early Middle Ages, focusing on key aspects such as changes in scale and the tension between continuity and rupture in classical and non-classical traditions, characteristic of the long late Antiquity up to the beginning of the Carolingian Renaissance.

Keywords: early medieval aesthetics, stained glass, enamels, cloisonné jewels, jeweled style

Resumen: La distinción entre artes «mayores» y «menores» tiene su origen en el humanismo renacentista. En el siglo xv, Filarete identificó la decadencia de la arquitectura de su tiempo

en la tendencia transalpina de construir monumentos en forma de turíbulos y tabernáculos, imitando a mayor escala las obras de los orfebres. Por tanto, desde su primera delimitación, las «artes menores» han incluido la orfebrería y otras formas artísticas afines. A pesar de sus dimensiones monumentales, las vidrieras pronto se unieron a esta categoría en la literatura postmedieval sobre las artes. Como confirman investigaciones recientes, la estética y las técnicas de las artes de la orfebrería, el esmalte y las vidrieras estuvieron profundamente relacionadas. Este artículo investiga las intersecciones artísticas que sustentaron la aparición de las vidrieras en la Alta Edad Media, centrándose en aspectos clave como los cambios de escala y la tensión entre continuidad y ruptura de las tradiciones clásicas y no clásicas, características de la larga Tardoantigüedad hasta el inicio del Renacimiento carolingio.

PALABRAS CLAVE: estética altomedieval, vidrieras, esmaltes, joyas cloisonné, joyería

In the *Ecclesiastical History of the English People*, written around 731, Bede reported that Naiton, King of the Picts, inhabitants of the northernmost regions of Britain, once asked Ceolfrid, Abbot of Monkwearmouth and Jarrow, to send him some master builders. He intended to build a church of stone, dedicated to the apostles Peter and Paul and built "after the Roman manner" (*iuxta morem Romanorum*).[1] The same Bede, in the *History of the Abbots of Wearmouth and Jarrow*, reported a similar fact that had occurred some decades earlier. When Abbot Benedict Biscop was planning the twin monasteries in Northumbria, he summoned master builders from Gaul to have a church made in stone "after the Roman manner". Benedict Biscop, educated at Lérins Abbey, on the Mediterranean coast of Gaul, had traveled to Rome, where he could possibly admire something of the past splendor of the Eternal City and the early Christian basilicas. Still, in the same letter, sent to an unknown recipient, he also asked for some master glaziers from Gaul, whose work, he said, was still unknown in Britain.[2]

In those two letters reporting facts that had happened at different times between the seventh and eighth centuries, we are thus informed that a specific Roman manner of building churches, meaning "built of stone", was specifically sought after in Britain at the time. At the same time, we learn that, together with master builders, also master glaziers were summoned from France. The latter's craftsmanship, however, is not traced back to any typical "Roman

---

[1] BEDE, *Historia ecclesiastica gentis Anglorum*, 5, 21. MIGNE (ed.), *PL* 95, 271. See also Francesca DELL'ACQUA, «*Illuminando colorat*». *La vetrata tra l'età tardo imperiale e l'Alto Medioevo: le fonti, l'archeologia*, Spoleto, 2003, p. 112, n. 67.

[2] *Nec plusquam unius anni spatio post fundatum monasterium interjecto, Benedictus Oceano transmisso Gallias petens, caementarios qui lapideam sibi ecclesiam juxta Romanorum quem semper amabat morem facerent, postulavit, accepit, attulit. […] Proximante autem ad perfectum opere, misit legatarios Galliam, qui vitri factores, artifices videlicet Britanniis eatenus incognitos, ad cancellandas Ecclesiae porticuumque et coenaculorum ejus fenestras adducerent. Factumque est, et venerunt; nec solum opus postulatum compleverunt, sed et Anglorum ex eo gentem hujusmodi artificium nosse ac discere fecerunt.* BEDE, *Vita Sanctorum Abbatum monasterii in Wiramuth et Girvum*,1. MIGNE (ed.), *PL* 94, 716–717. For a critical discussion of this passage, often quoted in the scholarly literature about the earliest stained-glass windows, see DELL'ACQUA, «*Illuminando colorat*», p. 112.

manner". The art of stained glass, which by Bede's time already had a few centuries behind it, was in fact particularly developed in Gaul at that time, as the early medieval archaeology research of the past two decades has shown.[3] Thus, a monumental expression deemed typical of ancient Romanity, such as the construction of buildings in stone, was matched, in the ideal architectural models sought by Benedict Biscop, with an art form that we now consider "typically medieval", namely stained glass, which was perceived at the time, and rightfully so, as particularly developed in Gaul. Two seemingly opposing currents coexisted harmoniously in the abbot's projects. Such a coexistence of artistic expressions, "decorative" motifs, and aesthetic principles with different ancestries is frequently found in early medieval art and calls for reflection on how the recovery of ancient and classical Romanity and those "non-classical" expressions were perceived. This is the starting point from which I would like to initiate the reflection at the heart of the present article, which aims to investigate some problematic aspects of the coexistence of classical and non-classical elements in early medieval art. I will use stained glass – an art form usually considered peculiar to the High Middle Ages – as a privileged observatory, since its origins and first diffusion on a continental scale can be located between Late Antiquity and the early Middle Ages.

Questions pertaining to scaling issues in relation to other arts (such as especially jewelry and goldsmithing) from which stained glass may have originated, as well as the inclusion of such forms of art in the "minor arts" in the post-medieval art literature, will be equally examined.

EARLY MEDIEVAL ART AND THE RECOVERY OF ANCIENT ART

The reemergence of antiquity as a recurring phenomenon in medieval art has been the subject of extensive research by scholars for a long time. The use of classical *spolia*; the meaning and different values attributable to the material or metaphorical reuse of classical objects, constructive elements, and motifs; the re-semantization of themes proper to classical antiquity in a Christian sense; and the conscious revival of the past have been widely investigated but still offer insights and reasons for further study.[4]

---

[3] DELL'ACQUA, «*Illuminando colorat*»; Sylvie BALCON-BERRY, Françoise PERROT, Christian SAPIN (eds.), *Vitrail, verre et archéologie entre le Ve et le XIIe siècle*, Paris, 2010; Sylvie BALCON-BERRY, "Origines et évolution du vitrail: l'apport de l'archéologie", in Michel HÉROLD, Véronique DAVID, *Vitrail: Ve-XXIe siècle*, Paris, 2014, pp. 19-31.

[4] The literature on the subject is extensive and encompasses diverse aspects of the reemergence of classicism that spanned the entirety of the Middle Ages. A classic reference is Erwin PANOFSKY, *Renaissance and Renascences in Western Art*, Stockholm, 1960, esp. Chapter 2. The various facets of the phenomenon of the reuse of classical materials during the medieval period are discussed in Arnold ESCH, "Spolien. Zur Wiederverwendung antiker Baustücke und Skulpturen in mittelalterlichen Italien", *Archiv für Kulturgeschichte*, 51 (1969), pp. 1-64; Salvatore SETTIS, "Les remplois", in François FURET (ed.), *Patrimoine, temps, espace. Patrimoine en place, patrimoine déplacé*, (Actes des entretiens du patrimoine), Paris, 1997, pp. 67-86; Jaś ELSNER, "From the Culture of *Spolia* to the Cult of Relics: The Arch of Constantine and the Genesis of Late Antique Forms", *Papers of the British School at Rome*, 68 (2000), pp. 149-184; Robin FLEMING, "The Ritual Recycling of Roman Building Material in Late 4th- and Early 5th-Century Britain", *Post-Classical Archaeologies*, 6 (2016), pp. 7-30; Ivan FOLETTI, Marie OKAČOVÁ, "An age of Fragmentation. Evidence from Late Antique Literary, Visual and Material Cultures", in Ivan FOLETTI, Marie OKAČOVÁ, Adrien PALLADINO (eds.), *A Radical Turn? Reappropriation, Fragmentation, and Variety in the Postclassical World (3rd–8th Centuries)*, (Convivium Supplementum 2022/2), Brno, 2022, pp. 24-47. Regarding the imitation of antiquity in the context of the so-called

Although it goes well beyond the purpose of this paper to undertake a historiographical examination of such an extensive topic, I nonetheless feel it is important to dwell briefly on such a seminal critical text as Erwin Panofsky's essay *Renaissance and Renascences in Western Art*, in which Panofsky reflected on the historiographical and ideological problem of the Renaissance and the various medieval "renascenses of the Antiquity", understood as the "premises" of the Renaissance spirit. He also reflected on how these medieval "premises" differed from the more profound revival of Antiquity proper to the Italian Quattrocento. In his programmatic focus on Western art, Panofsky identified the first of these medieval revivals of classical art in Carolingian art, while also acknowledging the existence of what he called "oases of classicism" in Mediterranean areas such as Italy, North Africa, southern Gaul, and Spain even before the Carolingian period.[5] Finally, he identified the presence of "revivals" (rather than survivals of antiquity) in Anglo-Saxon art, in works such as the Ruthwell Cross and the *Codex Amiatinus*. In works such as these, the classical tradition appears to be more persistent and more self-conscious. However, he also pointed out that those areas that were to create the basis of the Carolingian revival (northeastern France and western Germany) represented, from a classical standpoint, what he called "a kind of cultural vacuum".[6]

Panofsky also recognized the British Isles as a significant place of refuge for the ancient tradition in the pre-Carolingian age, but a place whose artistic production was ambivalent because "the British Isles simultaneously also produced the antinaturalistic 'Celto-Germanic' linearism, either violently expressive or rigidly geometrical, which was to counteract and ultimately to triumph over this classical tradition".[7]

As is evident from the cited passages in Panofsky's work, defining a distinct boundary between periods marked by tendencies toward the recovery of classical antiquity and periods marked by non-classical, anti-naturalistic tendencies is arduous, if not unfeasible. It is equally difficult to make a strict distinction on a geographical basis, identifying areas that were classicizing from areas that were not in the pre-Carolingian times.

It is precisely on these geographical areas and on the centuries in which Late Antiquity faded into the early Middle Ages that I wish to focus attention. I intend to present the partial results of a research project that I am directing as the Principal Investigator at the Centre for Early Medieval Studies in Brno, entitled *Fragmented Images. At the roots of the art of stained glass*. This project is funded by the Czech Science Foundation and aims to explore the origins of stained-glass art in the Western Middle Ages between the fifth and ninth centuries.

The research project focuses on the evidence for the earliest stained-glass windows, both written and material. The latter is based on archeological evidence, as the earliest known intact stained-glass windows date from the 1120s and 1130s (stained-glass windows in the cathedrals of Le Mans and Augsburg).

"1200 Style", see Laurence TERRIER ALIFERIS, *L'imitation de l'Antiquité dans l'art médiéval (1180–1230)*, Turnhout, 2016. Regarding the memory of antiquity in the Middle Ages from the early Christian age to the fourteenth century, see the essays collected in Ivan FOLETTI, Zuzana FRANTOVÁ (eds.), *The Antique Memory and the Middle Ages*, Rome, Brno, 2015.

[5] PANOFSKY, *Renaissance and Renascences*, p. 43.

[6] *Ibidem*, p. 44.

[7] *Ibidem*, p. 46.

An art form typically regarded as entirely medieval, namely stained glass, which was previously believed to have its origins in the Romanesque age or at most in the Carolingian age,[8] is now deemed an art that emerged between Late Antiquity and the early Middle Ages, as numerous archaeological discoveries of window glass and numerous written sources have substantiated.[9]

The path that led from the uncolored windows of the Roman tradition to the first "mosaic windows" – the appearance of which can be reconstructed only hypothetically – to medieval stained-glass windows, where the glass panes were painted, connected with lead, and installed on iron bars, was long and articulated and unraveled over at least five centuries, between the fifth and the ninth centuries. It is not accidental that Theophilus' treatise *De diversis artibus* suggested that the art of stained glass had already established a long tradition in the early twelfth century.

I intend to address a few still-open questions the importance of which is central: Can we say that stained glass was an entirely new form of art when it emerged? To what extent does the art of stained glass take up or continue any form of ancient art?

Since the earliest stained-glass windows *in situ* date from the twelfth century, it is natural to understand why stained glass has long been considered an art form typical of the Middle Ages, something that has little to do with classical antiquity. Moreover, it is a fact that classical architecture in Greece and Rome did not employ stained-glass windows.

From these premises, we could easily infer that the Quattrocento and Cinquecento humanist intellectuals and the Renaissance literature on art disregarded stained glass and despised it as barbaric and non-classical.

The picture, however, is much more complex. Giorgio Vasari in the *Lives of the Artists* expressed admiration for stained glass. The author indeed considered it a form of painting, one of the three major arts alongside architecture and sculpture. Despite acknowledging the transalpine origins of this art, he praised the work of master glaziers and dedicated a chapter of his book to the work of Guillaume de Marcillat, a French master who worked for the papal palace in Rome, as well as in Cortona and Arezzo, Vasari's hometown. Vasari, who trained as a painter in Guillaume de Marcillat's workshop, called him a great master in the art of stained glass.[10]

A similar sentiment was echoed by such a man of letters as Torquato Tasso, who in 1572, upon returning from a stay in France, wrote a letter to the Count of Ferrara regarding the customs of the provinces he had visited in France. In his letter, Tasso praised stained-glass windows and stated that glass, which in Italy was valued solely for the production of drinking vessels, was intended among the French for the decoration of the house of God.[11]

---

[8] Louis Grodecki, *Le vitrail roman*, Fribourg, 1977; Enrico Castelnuovo, *Vetrate medievali. Officine, tecniche, maestri*, Turin, 1994, pp. 211-215.

[9] Supra, n. 3.

[10] Giorgio Vasari, *Guglielmo da Marcilla*. Id., *Le vite de' più eccellenti pittori, scultori, et architettori*, iii.

[11] *Non vi è poi opera di pittura e di scoltura, se non rozza e disproporzionata; se forse tra le pitture non vogliamo porre le finestre di vetro colorite ed effigiate, le quali in moltitudine grandissima sono degne d'ammirazione non che di lode, così per la vaghezza e vivacità de' colori, come anco per lo disegno e artificio de le figure. Ed in questa parte hanno i Francesi che rimproverare gl'italiani; perché l'uso*

However, if we look back to the fifteenth century and read the authors of early Florentine humanism, we find a different scenario. Filarete, for instance, in his "Treatise on Architecture" overlooked stained glass, but considered goldsmithing; to be more precise, he deemed barbaric the *kleinkunst* aesthetics typical of goldsmithing and other arts that involved various techniques, such as stained glass.

Writing around 1460, Filarete asserted that the decadence typical of modern (i.e., Gothic) art was caused by the barbarians,[12] on whom he blamed the decadence of Latin letters on the Italian peninsula, the introduction of new rites and customs from beyond the Alps, and the widespread poverty that characterized Italy resulting in the absence of large architectural commissions and the consequent loss of "know-how" in architecture. Thus, with the Renaissance of his time – which Filarete dated back fifty-sixty years before him, to the beginning of the fifteenth century – it happened that "when anyone wanted to build any building in Italy, he had recourse to those who wanted to do the works, to goldsmith, painters, and these masons. […] The goldsmiths built their [buildings] like tabernacles and thuribles […] because these forms seemed beautiful in their own work. These modes and customs they have received from across the mountains, from the Germans and the French".[13]

Filarete therefore considered Gothic architecture a re-proposition on a monumental scale of "barbaric" goldsmithing objects such as thuribles and tabernacles.

Another important early humanist, Lorenzo Ghiberti, also a goldsmith, reported in his *Commentarii* that he had made several stained-glass windows for the cathedral in Florence, but he did not actually discuss the status of this art or give a specific assessment of it.[14]

While Vasari's positive opinion might lead us to believe that stained glass was revered by the great artists of the Renaissance, the almost total absence of mention of this art and its non-inclusion in the major arts canonized by the fifteenth-century Florentine humanists (Leon Battista Alberti above all) suggests otherwise. Certainly, if not directly stained glass,

---

del'arte de'vetri, che presso noi è principalmente in pregio per pompa e per delicia de' bevitori, è da loro impiegata nel'ornamento de le chiese di Dio, e nel culto de la religione. Torquato TASSO, *Lettera dalla Francia,* Lanfranco CARETTI (ed.), Roma, 1995, p. 44.

[12] When exactly this barbarization of customs and arts referred to by Filarete started is questionable. According to John Spencer, Filarete referred not to the age of the barbarian invasions, but to historical events closer in time, such as the German emperors' descents into Italy in the twelfth and thirteenth centuries to impose their law on the Italian communes; see John SPENCER, "Introduction", in FILARETE, *Treatise on architecture,* John SPENCER (ed.), New Haven and London, 1965, p. XXXII. However, Filarete actually claimed that "[architecture declined] as letters declined in Italy; that is, spoken and [written] Latin became more gross until fifty or sixty years ago, when minds became more subtle and were reawakened [to the past]. The same happened to this art through the ruin of Italy brought on by the wars of the barbarians who desolated and subjugated it many times", cf. FILARETE, *Treatise on architecture,* XIII, ff. 100r, 100v, p. 176. Filarete, therefore, traced the decline in architecture back to the decline in letters in Italy, that is, when written and spoken Latin became coarser. This is a time that, in my opinion, cannot be placed just in the twelfth or thirteenth century, but certainly well before, since the departure of Latin from the forms of classical expression could be easily traced back to times more remote than those. A few years earlier, Ghiberti, in the *Commentarii,* traced the beginning of the decline of the classical style back to the advent of Christianity in Rome at the time of Constantine and Pope Sylvester I. Cf. Lorenzo GHIBERTI, *Commentarii: Biblioteca nazionale centrale di Firenze,* Lorenzo BARTOLI (ed.), II, I, 333, Firenze, 1998, p. 83.

[13] FILARETE, *Treatise,* XIII, f. 100v, p. 176.

[14] GHIBERTI, *Commentarii,* p. 97.

goldsmithing, as depicted in Filarete, was regarded as a barbaric art form and, consequently, a minor one. This consideration also indirectly involves stained glass, which shares several aspects, both technical and aesthetic, with goldsmithing.

Despite the substantial size of typical medieval stained-glass windows (as well as post- and neo-medieval ones), the amalgamation of diverse techniques that characterize this art, such as the creation and cutting of colored glass, the painting on glass, and the utilization of metallurgy to produce lead cames and iron bars, resulted in the marginalization of stained glass and its inclusion *de facto* within the realm of applied arts, rendering it a minor art form.[15]

From my perspective, however, it is exactly because of this mingling of techniques that I consider stained glass, enameling, goldsmithing, and metalwork as inextricably linked. We can look to a leap in scale from the micro to the macro that yields a precise explanation if one examines the nature of stained glass at its origins, in Late Antiquity.

To understand the possible connections with other ancient art forms, I deem it advantageous to present both the current shared thesis on the origin of stained glass and an alternative one, which I am currently engaged in.

Theories on the origin and early history of stained glass

I will refer to the current theory on the genesis of stained glass as "the *opus sectile* thesis". It is not actually a fully articulated theory, but rather an opinion that has garnered some agreement among scholars, particularly in recent decades. However, it does have several weaknesses.

Over the past twenty years, some scholars have held the belief that stained-glass windows could have been primarily inspired by *opus sectile* wall decorations, wherein colored marble and occasionally glass, a less costly but more versatile substitute for marble, were alternated to create figurative compositions. This technique was extensively employed in decorations of public and private, pagan and Christian spaces during the imperial era.[16]

In particular, wall decorations in glass *opus sectile*, found in excavations at the ancient port of Isthmia-Kenchreai, near Corinth, in the 1970s, led archaeologists to believe that similar decorations were the progenitors of stained glass, establishing a direct link between an art form from classical antiquity and a typically medieval one (Fig. 1).[17] In addition to

---

[15] The misleading inclusion of stained-glass art in the domain of minor arts lasted until very recently in modern historiography. Michael COTHREN, "Some personal reflections on American modern and postmodern historiographies of Gothic stained glass", in Colum HOURIHANE (ed.), *From Minor to Major. The Minor Arts in Medieval Art History*, Princeton, 2012, pp. 255-270.

[16] See the views expressed in particular by Beat Brenk, David Whitehouse, Francesca dell'Acqua, Rosemary Cramp, Helen Zakin in Francesca DELL'ACQUA, David WHITEHOUSE, "Tavola rotonda", in Francesca DELL'ACQUA, Romano SILVA (eds.), *Il colore nel Medioevo. Arte, simbolo, tecnica. La vetrata in occidente dal IV all'XI secolo*, Atti delle Giornate di Studi (Lucca, 23-24-25 settembre 1999), Lucca, 2001, pp. 281-287; Francesca DELL'ACQUA, «*Illuminando colorat*», p. 7; EAD., "Entre fantaisie et archéologie", in BALCON-BERRY, PERROT, SAPIN (eds.), *Vitrail, verre*, pp. 15-20; EAD., "Early History of Stained Glass", in Elizabeth C. PASTAN, Brigitte KURMANN-SCHWARZ, *Investigation in Medieval Stained Glass*, Leiden, pp. 23-35, part. 26.

[17] The idea was first proposed as a simple suggestion by Robert Brill, a member of the team of scholars who first published the *opus sectile* glass panels from Kenchreai, though he warned that "the separation in time is so great, and

the examples from Corinth, several other figurative panels, such as those from the Aula near Porta Marina in Ostia and the more renowned ones from the Basilica of Junius Bassus in Rome, demonstrate that a distinctive characteristic of this type of marble (and glass) *sectilia* decoration was a marked figurativeness.[18]

In contrast, the earliest examples of early medieval stained-glass windows are far from displaying such figurative qualities.

Indeed, the windows of the Roman era, with a few exceptions, have colorless glass, which is glass that was made without adding metal oxides as coloring agents. Such glass was rarely transparent, as complete transparency was very difficult to achieve, but more often showed greenish or bluish nuances due to the metal impurities contained in the sand, one of the primary raw materials necessary for glass production (Fig. 2).

As an alternative to glass, *lapis specularis*, a variety of gypsum cut into thin, nearly transparent sheets, was widely used to close the framework openings of the window screens,

Fig. 1 Seascape, glass *opus sectile* from the port of Kenchreai (Corinth), Archaeological Museum, Isthmia (photo: author)
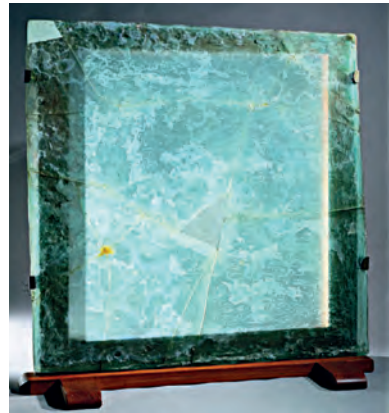

Fig. 2 Uncolored Roman window glass from the House of Julius Polybius, Parco Archeologico, Pompeii (photo A. Benestante, according to Beretta, Di Pasquale 2004, cat 3.6)

the difference in essential glass quality and its treatment so distinctly different that this temptation is perhaps best resisted"; see Robert BRILL, "Scientific studies of the panel materials", in Leila IBRAHIM, Robert SCRANTON, Robert BRILL, (eds.), *Kenchreai: Eastern Port of Corinth, The Panels of Opus Sectile in Glass*, Leiden, 1976, pp. 227-255, sp. p. 228. Several window-glass fragments that have emerged in archaeological excavations in the subsequent decades have led some scholars to reevaluate Brill's intuition, considering the smaller chronological gap now separating the figurative *opus sectile* panels from the earliest attestations of window glass, which fell in Late Antiquity (see n.16).

[18] Regarding the aesthetic and technique of glass *opus sectile* panels, see Bente KIILERICH, "The opus sectile from Porta Marina at Ostia and the Aesthetics of interior decoration", in I. JACOBS, *Production and Prosperity in the Theodosian Period*, Leuven, 2014, pp. 169-187; EAD., "Subtlety and simulation in late antique opus sectile", in Paola A. ANDREUCCETTI, Deborah BINDANI (eds.), *Il colore nel Medioevo. Arte, simbolo, tecnica*, (Collana di studi sul colore 5), Lucca, 2016, pp. 41-59; Licia VLAD BORELLI, *Musivaria. Mosaico e opus sectile in età antica: storia, tecniche, conservazione*, Roma, 2016, sp. ch. 2, pp. 101-126; Bente KIILERICH, Hjalmar TORP, "From Alexandria to Kenchreai? The Puzzle of the Glass Sectile Panels", in Tamás A. BÁCS, Ádám BOLLÓK, Tividar VIDA (eds.), *Across the Mediterranean – Along the Nile:*

as known from material findings and numerous written sources (Pliny the Elder, Pliny the Younger, Martial, Lactantius and Isidore of Seville).[19]

Early basilicas in Rome featured window screens mostly made of stucco, sometimes stone, pierced with geometric openings of various shapes. Some surviving screens still contain fragments of *lapis specularis* embedded within the stucco valves, indicating that it was used as window-screen material. The case of the stucco transenne from Santa Sabina in Rome, discovered by Antonio Muñoz during restoration works between 1914 and 1919, is renowned due to the recent restoration and musealization (Fig. 3).[20]

Fig. 3 Window-transennae nr. 7–8, stucco and lapis specularis, from the basilica of Santa Sabina, Museo Domenicano di Santa Sabina all'Aventino, Rome (photo: P. Piccioni ICR, according to Brunetto, Galanti et al. 2020, fig. 7)

Studies in Egyptology, Nubiology and Late Antiquity Dedicated to László Török on the Occasion of his 75th Birthday, Budapest, 2018, pp. 643-658; Eleonora Gasparini, "Old and new evidence for glass in *opera sectilia*: visual dialogues between appearance and reality", *Journal of Roman Archaeology*, 35 (2022), pp. 139-176.

[19] Cf. the authors mentioned by Francesca Dell'Acqua, "Le finestre invetriate nell'antichità romana", in Marco Beretta, Giovanni Di Pasquale (eds.), *Vitrum. Il vetro fra arte e scienza nel mondo romano*, Firenze, 2004, pp. 109-119, sp. p. 113: Pliny the Elder, *Naturalis Historia*, xxxvi, 46,1; Pliny the Younger, *Epistula* ii, 17, 21; Martial, *Epigramma* viii, 14; Lactantius, *Libri de Opificio Dei*, viii, 11; Basil of Caesarea, *Hexaemeron*, iii; Isidore of Seville, *Etymologiae*, xvi, 37.

[20] Simona Pannuzi, "Illuminazione naturale e spazi finestrati nelle chiese paleocristiane ed altomedioevali: le transenne di finestra in stucco", *Hortus Artium Medievalium*, 26 (2020), pp. 45-59. Anna Brunetto, G. Galanti et al., "L'intervento conservativo sulle transenne in stucco gessoso e lapis specularis della basilica di Santa Sabina a Roma: Approccio metodologico, prassi operative e studio della tecnica esecutiva", *Hortus Artium Medievalium*, 26 (2020), pp. 60-72.

Certain written sources from the late Roman period have been interpreted as referring to the use of stained-glass windows in early Christian basilicas.[21] Such is the case with Prudentius' description of the Basilica of St. Paul Outside the Walls, written around 405: "Then [the Emperor] covered the curves of the arches with splendid glass of different colors, similar to meadows that are bright with flowers in spring".[22]

Similarly, Sidonius Apollinaris in a letter written in the mid-fifth century (ca. 469) described the Lyon Cathedral in these words: "Marble, varied by different lustrous hues, pervades the vaults, the floor, and the windows; forming patterns of various colors, a grass-green incrustation carries sinuous lines of sapphire-colored stones over the green glass".[23]

In both cases, the only certain fact that can be deduced is that in Saint Paul's it was not the windows that were glazed, but rather the spaces between the arches that were perhaps decorated with glass *sectilia* incrustations. This has been proposed by Nicola Camerlenghi and, before him, Herbert Kessler, on the basis of Antonio Uggeri's 1823 engravings providing a depiction of St. Paul's, just before the great fire that devastated the basilica.[24] In the case of Sidonius Apollinaris, it can be inferred that in the Lyon Cathedral the window panes were green (*prasinum vitrum*) and had that greenish tinge customary of Roman "colorless" glass, that is, glass not intentionally colored. The marble and the tesserae of the mosaics (*sapphiratos lapillos*) that likely adorned the walls, the vaults, and the spaces between the windows were thus polychrome.

While in fifth-century Christian Roman basilicas the windows were glazed with plain greenish glass panes and stucco transenne filled with *lapis specularis*, elsewhere in Europe alternative solutions were adopted. Findings of colored glass quarries, such as those abundantly found in the territory of Gaul, led archaeologists to reconstruct windows made of colored glass panes cut into regular geometric shapes, set in geometric grids presumably made of wood, but perhaps also stucco or stone.

These more archaic stained-glass windows, named "mosaic windows", were characterized by a pronounced polychromy, completely absent in the Roman examples.[25] These early windows were therefore far from accommodating narrative scenes or other images, as the glass *opus sectile* panels, their presumed ancestors, did.

Findings from the French–Swiss Alpine area, dating back to between the 5th and the late 8th centuries, well testify to the range of possible solutions adopted in glass windows

---

[21] Dell'Acqua, «*Illuminando colorat*», pp. 15-20; 101-102.

[22] *Tum camiros hyalo insigni varie cucurrit arcus: sic prata vernis floribus renident*. Prudentius, Peristephanon, XII, 53-54. H. J. Thomson (ed. and transl.), Cambridge MA, London, 1953, pp. 326-327.

[23] *Distinctum vario nitore marmor, percurrit cameram solum fenestras, ac sub versicoloribus figuris vernans, herbida crusta sapphiratos, flectit per prasinum vitrum lapillos*. Sidonius, *Epistulae*, II, x, 11-15. William B. Anderson (ed.), Cambridge MA, 1936, pp. 464-467.

[24] Nicola Camerlenghi, *St. Paul's Outside the Walls. A Roman basilica, from antiquity to the modern era*, Cambridge 2018, p. 65; Herbert L. Kessler, *Old St. Peter's and Church Decoration in Medieval Italy*, Spoleto, 2002, p. 51. Both Kessler and Camerlenghi drew on the earlier study by Günter Jakubetz, *Die verlorenen Mittelschiff-Malereien von Alt-St. Paul in Rom*, Ph.D. diss. Universität Wien, Vienna, 1976. For Uggeri's engraving, cf. https://archive.org/details/dellabasilicadis00ugge/page/n23/mode/2up [last accessed: 10/10/2024].

[25] Balcon-Berry, "Origines", pp. 24-25.

at the start, all of which show marked polychromy. The window-glass fragments from the church of the *castrum* in *Epomanduodurum/*Mandeure (Doubs, France, fifth century);[26] those from the funerary church of Sous-le-Scex, near Sion (Valais, Switzerland, fifth–sixth centuries);[27] from Huy, near Liège (Belgium, fifth–sixth centuries);[28] and from the church of Baume-les-Messiers (Jura, France, late seventh–eighth century) are all pieces of evidence of this type of polychrome "mosaic window" from the early period (Figs. 4-5).[29]

The data collected so far in the database we are preparing within the research project (which, up to the present moment, consist of a total of about 150 finds from 120 different sites, to which about 35 additional attestations deriving from written sources can be added) show that there is no correlation between the areas of diffusion of the oldest stained-glass windows and those with the diffusion of figured glass or marble *opus sectile*. The latter are, in fact, attested in Rome and Italy, Constantinople and Greece, Alexandria and northeastern Africa (Egypt, Libya).[30] Conversely, the earliest stained glass found primary dissemination between the fifth and the seventh centuries in two areas: the late Roman Gaul and the East Alpine/North-Adriatic regions.[31] These areas were joined, in the eighth and ninth centuries, by Anglo-Saxon England, Central Europe, central Italy and the Venetian lagoon, and later by Scandinavia.[32]

---

[26] Inés PACTAT, "Le mobilier en verre", in Philippe BARRAL, Cédric CRAMATTE et al. (eds.), *Projet Collectif de Recherche "Approche pluridisciplinaire d'une agglomération antique Epomanduodurum (Mandeure-Mathay, Doubs). Archéologie, Sciences de la Terre et de l'Environnement"*, Besançon, 2011, pp. 274-288.

[27] Cordula M. KESSLER, Sophie WOLF, Stefan TRÜMPLER, "Die frühesten Zeugen ornamentaler Glasmalerei aus der Schweiz. Die frühmittelalterlichen Fensterglasfunde von Sion, Sous-le-Scex", *Zeitschrift für Schweizerische Archäologie und Kunstgeschichte*, 62 (2005), pp. 1-30; Sophie WOLF, Yvonne GERBER, Willem STERN, "The composition and manufacture of early medieval coloured window glass from Sion (Valais, Switzerland) – A Roman glass making tradition or innovative craftsmanship?", *Archaeometry*, 47/2 (2005), pp. 361-380.

[28] Chantal FONTAINE, "Fragments de verres plats d'époque mérovingienne trouvés à Huy (Belgique): une production locale?", in *De transparentes spéculations*, pp. 72-73.

[29] Carine BAYOL, Sébastien BULLY, et al., "Les vitraux du haut Moyen Âge de Baume-les-Messiers (Jura, France): contexte stratigraphique, analyses archéométriques et mesures conservatoires", in Inès PACTAT, Claudine MUNIER, *Le verre du VIIIe au XVIe siècle en Europe occidentale*, (Actes du colloque international de l'AFAV, Besançon, 5-7 Décembre 2016), Besançon, 2020, pp. 231-244.

[30] GASPARINI, "Old and new evidence".

[31] For the late Roman Gaul/Merovingian *Francia* area, see the essays in Sylvie BALCON *et al.*, *Vitrail, verre*; *De transparentes spéculations. Vitres de l'Antiquité et du Haut Moyen Age [Occident-Orient]*, exhibition catalogue (Bavay, Forum Antique, 2005). For the northeastern Alpine area, see Sabine LADSTÄTTER, *Die materielle Kultur der Spatantike in den Ostalpen: eine Fallstudie am Beispiel der westlichen Doppelkirchenanlage auf dem Hemmaberg*, Vienna, 2000; Aurora CAGNANA, *Lo scavo di San Martino di Ovaro (sec. V-XII)*, Archeologia della cristianizzazione rurale nel territorio di Aquileia, (Documenti di Archeologia, 49), Mantova, 2011, pp. 264-295 and related bibliography; Tina MILAVEC, "Late Antique Window Glass from the hilltop settlement of Tonovcov Grad near Kobarid", *Arheoloski Vestnik*, 66 (2015), pp. 79-102; Inès PACTAT, Morana ČAUSEVIČ-BULLY, Sébastien BULLY et al., "Origines et usages du verre issu de quelques sites ecclésiaux et monastiques tardo-antiques et haut médiévaux du littoral nord Croate" in Adele COSCARELLA, Elisabetta NERI, Ghisilaine NOYÉ (eds.), *Il vetro in transizione (IV-XII secolo). Produzione e commercio in Italia meridionale e nell'Adriatico*, Bari, 2021, pp. 289-302.

[32] For Anglo-Saxon England, see Rosemary CRAMP, "Window Glass from the Monastic Site of Jarrow. Problems of interpretation", *Journal of Glass Studies*, XVII (1975), pp. 88-96; EAD., "Anglo-Saxon Window Glass", in Jennifer
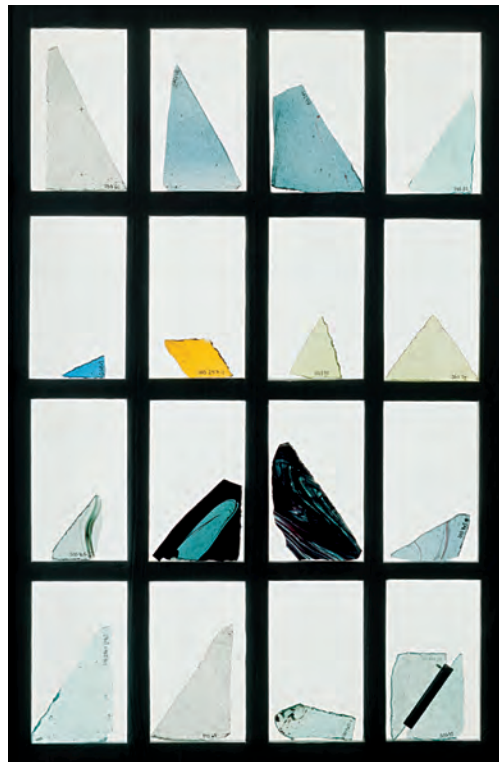
Fig. 4 Fragments of window glass from the ancient cemetery church of Sous-le-Scex (Sion). Vitrocentre, Romont (photo: © Vitromusée Romont / Yves Eigenmann, Fribourg, with permission; VMR 727: https://www.vitrosearch.ch/de/objects/2503097).

Fig. 5 Proposal for the restoration of a "mosaic window" from Baume-les-Messieurs. Reconstruction assembly by S. Bully et M. Čaušević-Bully, photo L. Van Wersch (according to C. Bayol, S. Bully et al. 2020, fig. 7)

The lack of geographical correlation alone does not fully account for the discontinuity of *opus sectile* models in the early medieval period. However, it is also true that these late antique models had a relatively limited spread, both geographically and chronologically, and did not experience true continuity in the early medieval era. From the fifth century onward, only marble *sectilia* continued to be used, exclusively for geometric floor decorations.

The "mosaic windows" at the start mostly had a geometric layout of colored glass quarries, arranged in regular grids, as seen in a reconstructed window from Jarrow, or so as to make geometrical compositions, as seen in the reconstructed examples from Müstair

(Fig. 6).[33] However, not only were early medieval stained-glass windows geometrical, they also started to accommodate figurations thanks to the possibilities offered by lead cames. This took place during a period that is currently difficult to determine with precision, as lead cames were often recycled and remelted, making their discovery in archaeological excavations more challenging.[34] We cannot totally exclude that lead started being used to connect glass early, at least in some areas of Europe. However, it is only at a later date (not earlier than the late seventh century, at the current state of our knowledge) that lead allowed for the making of figurative windows. Lead cames not only accomplished the technical task of connecting the glass, but they were also used to craft images. Indeed, the malleability of the metal enabled it to contribute to the design of the image during a time when glass painting techniques were not yet prevalent.

Some examples illustrate well this crucial role played by lead, among which the fragmentary stained-glass window found at San Vincenzo al Volturno (ca. 830) particularly stands out. It depicts the bust of Christ, whose face, virtually made of light, is rendered with transparent glass, while the details of the figure (the hair, fingers, nimbus bead) and the

---

PRICE (ed.), *Glass in Britain and Ireland AD 350-1100*, (British Museum Occasional Papers, 127), London, 2000, pp. 105-114; EAD., "Window glass from the British Isles. 7th-10th century," in DELL'ACQUA, SILVA (eds.), *La vetrata in occidente*, pp. 67-85; EAD., *Wearmouth and Jarrow monastic sites*, Swindon, 2006, vol. 2., pp. 56-161. For central Europe see Béla Miklós SZŐKE, Karl Hans WEDEPOHL, Andreas KRONZ, "Silver-Stained Windows at Carolingian Zalavár, Mosaburg (Southwestern Hungary)", *Journal of Glass Studies*, 46 (2004), 85-104; Luděk GALUŠKA, Jiří MACHÁČEK, Karol PIETA, Hedvika SEDLÁČKOVÁ, "The Glass of Great Moravia: Vessel and Window Glass, and Small Objects", *Journal of Glass Studies*, 54 (2012), pp. 61-92. For the finds in the Venetian lagoon, see Francesca VAGHI, Marco VERITÀ, Sandro ZECCHIN, "Silver Stain on Medieval Window Glass Excavated in the Venetian Lagoon", *Journal of Glass Studies*, 46 (2004), pp. 105-108; ID., "Vetri da finestra del IX-XI secolo rinvenuti nella Laguna di Venezia", in Daniela STIAFFINI, Silvia CIAPPI, *Trame di luce. Vetri da finestra e vetrate dall'età romana al Novecento*, (Atti delle X giornate di studio, Pisa, 12-14 novembre 2004), pp. 27-32; Marco VERITÀ, Sandro ZECCHIN, "Il vetro veneziano: influenza bizantina e islamica", in A. LARESE, F. SEGUSO, *Il vetro nel Medioevo tra Bisanzio l'Islam e l'Europa (VI-XIII secolo). Aggiornamenti scavi e ricerche sul vetro*, (Venice, 19-21 October 2007), Venezia, 2012, pp. 167-172. For central Italy, see Martine S. NEWBY, "The glass from Farba abbey: an interim report", *Journal of Glass Studies*, 33 (1991), pp. 32-41; Francesca DELL'ACQUA, "Ninth-century window glass from the monastery of San Vincenzo al Volturno (Molise, Italy)", *Journal of Glass Studies*, 39 (1997), pp. 33-41; EAD., "The Christ from San Vincenzo al Volturno. Another instance of 'Christ's dazzling face'", in *The Single Stained-Glass Panel. XXIV International Colloquium of the Corpus Vitrearum* (Zurich, 30th of June–4th of July 2008), S. TRÜMPLER (ed.), Bern, pp. 11-22; for southern Italy and the Adriatic area, see Adele COSCARELLA et al. (eds.), *Il vetro in transizione (VI–XIII secolo)*, Bari, 2021. For Scandinavia, see Bernard GRATUZE, Mads DENGSØ JESSEN, "Viking Age Windows. A reassessment of windowpane fragments based on chemical analysis (LA-ICP-MS) and their find contexts", *Danish Journal of Archaeology*, 12/1 (2023), pp. 1-26.

[33] Sophie WOLF, Cordula M. KESSLER, Jürg GOLL, Stefan TRÜMPLER, Patrick DEGRYSE, "The Early Medieval Stained-Glass Windows from St. John, Müstair: Materials, Provenance and Production Technology", in *Annales 20ᵉ AIHV* (Fribourg, Romont 7–11 September 2015), Romont, 2017, pp. 660-667.

[34] A find of glass with a lead stripe from Tours, dated to the fifth century, seems to date this technique to very early times, but the actual dating of that find is problematic. Sylvie BALCON-BERRY, Bruce VELDE, "Évolution et caractères techniques et esthétiques du verre plat et du vitrail de l'antiquité tardive à l'époque carolingienne", in Sylvie BALCON-BERRY, Brigitte BOISSAVIT-CAMUS, Pascale CHEVALIER (eds.), *La mémoire des pierres. Mélanges d'archéologie, d'art et d'histoire en l'honneur de Christian Sapin*, Turnhout, 2013, pp. 141-153, sp. pp. 142-143. See also James MOTTEAU, "Le verre à vitre dans la Vallée de la Loire moyenne dans le Haut Moyen Âge", in *De transparentes spéculations. Vitres de l'Antiquité et du Haut Moyen Age [Occident-Orient]*, exhibition catalogue (Bavay, Forum Antique, 2005), pp. 98-101, part. 101.
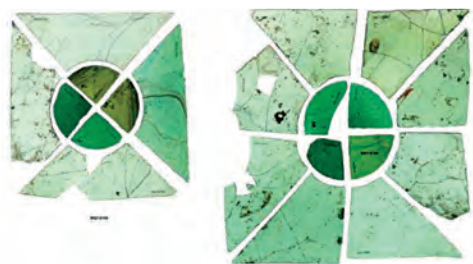
Fig. 6 (left) Fragments of window glass from the monastery of St. John the Baptist in Müstair, Vitrocentre, Romont (photo: © Vitromusée Romont / Yves Eigenmann, Fribourg, with permission. https://www.vitrosearch.ch/de/objects/2503060); (right) reconstruction proposal of a group of green colored glass from the same site (according to Wolf, Kessler et al., 2017, fig. 1b)

capital letter *alpha* in the upper left corner – likely in parallel with a now-lost letter *omega* on the opposite side – were created through skillful leadwork[35] (Fig. 7).

The same logic guided the reconstruction of the window glass quarries found in excavations at Jarrow, Northumbria, the monastery founded by Benedict Biscop where Bede the Venerable was active. The glass finds, which date from the late seventh or eighth century, were reassembled to recompose a stained-glass window with a figure of a saint made solely of unpainted glass and lead (Fig. 8).[36]

The fragments uncovered in the excavations of the church of Notre-Dame-de-Bondeville near Rouen likely once formed one or more figurative stained-glass windows. Here, too, we find very thin, non-painted polychrome glass fragments, cut into curvilinear or geometric shapes, allowing for the identification of parts of human bodies (arms, legs, feet), once connected through lead cames, some of which have been found attached to the glass and some independently (Fig. 9).

---

[35] Dell'Acqua, "The Christ from San Vincenzo".

[36] Cramp (ed.) "Window Glass from the Monastic Site of Jarrow"; Ead. (ed.), *Wearmouth and Jarrow monastic site*.
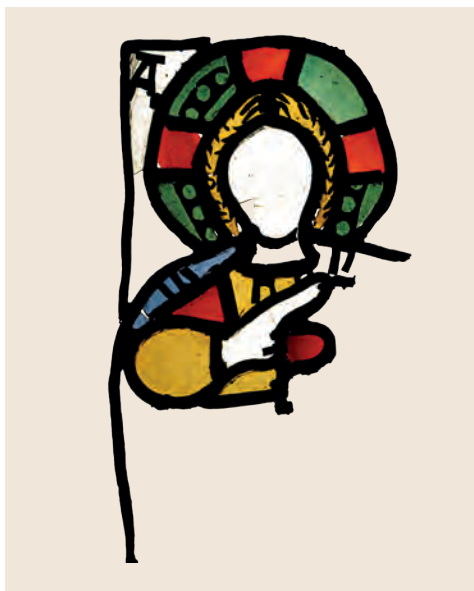
Fig. 7 Bust of Christ, fragmentary stained-glass window with original leads, retroilluminated, from S. Vincenzo al Volturno, Archaeological Museum, Venafro (foto: author)
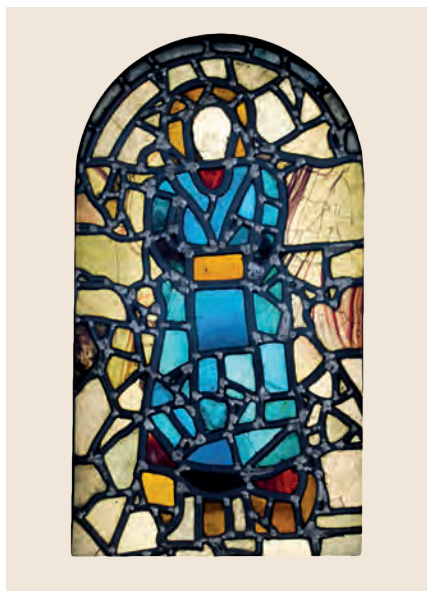

Fig. 8 Reconstructed figure of a saint, from St Paul's in Jarrow, original stained glass quarries and modern lead cames, Bede's World Museum, Jarrow (according to Cramp 2006, vol. 2, fig. 7.1.15.b)

Fig. 9 Fragments of colored window glass and leads from the church of Notre-Dame de Bondeville (Rouen), Cité du vitrail, Troyes (photo: author, with permission)

A DIFFERENT HYPOTHESIS

Early medieval stained-glass windows, which used only glass and lead to create images, "work" in a manner that, rather than resembling the figurative late Roman *opus sectile* panels, is much closer to cloisonné jewelry.[37]

This goldsmithing technique, widely used throughout Late Antiquity and the early Middle Ages for brooches, liturgical vessels, and other objects, is characterized by the frequent use of colored materials.

Gems, inlays of red garnets or other semiprecious stones, glass paste, and cold-cut colored glass or enamels were soldered onto a metal plate (often copper, silver, or gold) and separated by thin, metallic walls that created compartments. Early medieval cloisonné jewels often featured a figuration with simple forms (geometric figures, crosses), but in other cases, especially in those jewels where the *cloisons* were filled with enamels, featured images (human figures, faces, sacred scenes).[38]

Relevant examples of "aniconic" cloisonné (or bearing only simple forms such as crosses) include those from the Treasury of Childeric (Paris, Bibliothèque nationale, fifth century) (Fig. 10), the cross of St. Eligius from the treasury of Saint-Denis (Paris, Bibliothèque nationale, seventh century), and the Merovingian brooch from Marilles (Bruxelles, Musée art et histoire, 551–625), which shows a cross standing out from a circular field in the center of the object, emerging from the aniconic lattice of *cloisons* filled with red garnets surrounding it.

Examples of figurative enamel cloisonné objects spread in early Medieval Europe from the sixth–seventh centuries on include the "Castellani brooch", of possible Lombard production, from southern Italy (London, British Museum, late seventh–early ninth centuries); the "Cumberland Medallion" from the Guelph Treasure of Brunswick Cathedral, probably a sacerdotal medallion depicting a bust of Christ (Cleveland Museum of Art, late eighth century); the "Alfred Jewel," an Anglo-Saxon object interpreted as the terminal part of one of several staffs that King Alfred the Great sent to the bishops of his kingdom (Oxford, Ashmolean Museum, ninth century) (Fig. 11); and the reliquary-cross of Pope Paschal I (Vatican Museums, early ninth century).[39]

At the present time, the research conducted within the project is verifying the proximity and a transfer of techniques and know-how among metalworkers, goldsmiths, enamelers,

---

[37] This working hypothesis has already been outlined in Alberto VIRDIS, "Fragmentation as a Visual Principle. From Cloisonné to Early Stained Glass", in Ivan FOLETTI, Marie OKÁČOVÁ, Adrien PALLADINO (eds.), *A radical turn? Reappropriation, fragmentation, and variety in the postclassical world (3rd–8th centuries)*, *Convivium Supplementum 10*, Turnhout, 2023, pp. 78-97.

[38] Noel ADAMS, "The development of early garnet inlaid ornaments", in Csanád BÁLINT (ed.), *Kontakten zwischen Iran, Byzanz und der Steppe in 6-7. Jh.*, Budapest-Naples-Rome, 2000, pp. 13-70; Isabella BALDINI LIPPOLIS, "Appunti per lo studio dell'oreficeria tardo-antica e altomedievale", in Isabella BALDINI LIPPOLIS, Maria T. GUAITOLI (eds.), *Oreficeria antica e medievale. Tecniche, produzione e società*, Bologna, 2009, pp. 103-125; Jack OGDEN, *Jewelry Technology in the Ancient and Medieval World*, Harpswell ME, 2024.

[39] For a history of early medieval enameled jewels, which includes all of the objects mentioned, see Günther HASELOFF, *Email im frühen Mittelalter: frühchristliche Kunst von der Spätantike bis zu den Karolingern*, Marburg, 1990.

Fig. 10 Treasures from the tomb of Childeric I, cloisonné with gold and garnets. Left: chape from the scabbard of Childéric's scramasaxe; upper right: fittings from Childéric's seax scabbard; lower right: Childéric's spatha, lower guard; Bibliothèque Nationale de France, Paris (from Gallica, open license [cf. gallica.bnf.fr/html/und/histoire/le-tresor-de-childeric-ier, last accessed 28-11-2024].

and master glaziers.[40] The coexistence of glass workshops and metal-or-enamel workshops is frequently documented in monastic settlements of early medieval Europe, particularly in Merovingian Gaul, in locations such as Hamage, Stavelot, and Luxeuil-les-Bains,[41] but also elsewhere, such as the monastery of San Vincenzo al Volturno, in central-southern Italy.[42]

It could be argued that the change in scale between an average *cloisonné* jewel and a stained-glass window is an obstacle to the idea of the former as a possible model for the latter.

---

[40] Michelle BEGHELLI, P. Marina DE MARCHI (eds.), *L'Alto medioevo. Artigiani, tecniche produttive e organizzazione manifatturiera*, *2. I maestri del metallo: l'intelligenza nelle mani*, Roma, 2017. The proximity between the outcomes of goldsmithing with garnets and gemstones and the early medieval stained-glass windows has already been reported in CASTELNUOVO, *Vetrate medievali*, p. 9; DELL'ACQUA, «*Illuminando colorat*»; KESSLER, WOLF, TRÜMPLER (eds.), "Die frühesten Zeugen", p. 11; CRAMP, "Window glass from the British Isles", p. 77. Similar analogies have also been identified with Romanesque stained glass, such as those from Châlons-en-Champagne, the polylobed design of which has been compared to that of some Mosan enamel plaques; cf. BALCON-BERRY, "Origines", p. 30.

[41] See the essays collected in Christian SAPIN, Sébastien BULLY (eds.), *Au seuil du cloître: la présence des laïcs (hôtelleries, bâtiments d'accueil, activités artisanales et de services) entre le Ve et le XIIe siècle*, (Actes des 3èmes journées d'études monastiques, Vézelay, 27-28 juin 2013), *Bulletin du centre d'études médiévales d'Auxerre*, Hors série n° 8, 2015. See especially the articles by Sébastien BULLY, Aurélia BULLY, Inès PACTAT, "Des traces d'artisanat dans les monastères comtois du haut Moyen Âge"; Étienne LOUIS, "Les indices d'artisanat dans et autour du monastère de Hamage (Nord)"; Philippe MIGNOT, "Métiers d'artisan dans les abbayes ardennaises de Saint-Hubert et Stavelot-Malmedy (VIIe-XIIe siècle)". The entire issue is available online at https://journals.openedition.org/cem/13574 [last accessed 10/11/2024].

[42] Francesca DELL'ACQUA, "'…nisi ipse Daedalus…nisi Beseleel secundus'. L'attività artistica presso il monastero di San Vincenzo al Volturno in età carolingia", in Flavia DE RUBEIS, Federico MARAZZI (eds.), *I monasteri nell'alto*

Fig. 11 Medallion with the bust of Christ ("The Cumberland Medallion"), from the Guelph Treasure, cloisonné enamel and gold on copper plate, Museum of Art, Cleveland. (https://www.clevelandart.org/art/1930.504# public domain image).

However, we must consider that early medieval stained-glass windows were small in size: the bust of Christ at St. Vincenzo al Volturno is about only 19 cm high and the reassembled figural stained-glass window from Jarrow is about 35 cm high.[43]

ANCIENT GRAECO-ROMAN ART AND CLOSIONNÉ JEWELS

To reconnect what has discussed so far to the initial question – "to what extent does the art of stained glass take up or continue any form of ancient art?" – we might ask ourselves: What is classical in the art of enamel, an art that combines various materials and a mixture of techniques peculiar to goldsmithing, metalwork, and glass? It appears that very little or no aspect of this art harks back to classical art. However, the picture is again more complicated than this.

There is interesting evidence for the art of enameling in the Graeco-Roman world. The Εἰκόνες or *Imagines*, that great book of ancient ekphrasis written in Greek in the third-century by Philostratus the Elder, defined enameling as an art technique typical of the Celts. The Εἰκόνες is a work that describes and interprets some paintings that were displayed in the portico of a Neapolitan villa where Philostratus was staying as a guest. In describing a painting of "barbarian" hunters, hunting on horseback, Philostratus wrote:

---

medioevo. Topografia e strutture degli insediamenti monastici fra l'età carolingia e l'età della Riforma (secoli VIII-XII). Il caso di San Vincenzo al Volturno a confronto con le esperienze italiane ed europee, Rome, 2008, pp. 289-308.

[43] Rosemary Cramp stated that at Jarrow the evidence for small-scale glass working is indisputable, as the crucibles, hearth, and waste products indicate; cf. CRAMP, *Wearmouth and Jarrow*, p. 78.

> The horses they ride are no two alike, white and chestnut and black and bay, horses with silver bits, dappled horses with golden trappings–these pigments, it is said, the barbarians living by Oceanus compound of red-hot bronze, and they combine, and grow hard, and preserve what is painted with them.[44]

This is the earliest extant description of enameling, the application on a metal surface of a colored vitreous paste that can be transparent or opaque, by casting and fixing through fire. Depending on its chemical components, the paste sticks in various ways to the metal, with different aesthetic effects. Even if enamel was not an art at which the Romans excelled, inasmuch as they saw and admired these techniques in the objects produced by the Celts – as Philostratus tells us –, the use of enamel was also known and employed in ancient Graeco-Roman production, in jewels that displayed extensive use of filigree, gem inlays, and cameos.

Catherine Johns already identified similarities and distinctions between the Celtic tradition and the Hellenistic one in Romano-British jewelry:

> Hellenistic gold jewellery differs from the products of the Celtic north in four fundamental respects: in purpose or function; in the techniques of the craftsman; in the range of decorative motifs favoured; and in the types of object made. […] At the risk of oversimplification, it is possible to state that the ultimate difference between Celtic and Classical art is that while the former is basically abstract, the latter is naturalistic and figurative. The subtly judged balance of curved lines, filled areas and voids in Celtic decoration do, of course, owe much to naturalistic forms and indeed some of them can be traced back specifically to Classical floral scrolls and palmettes, but the Celtic artist and craftsman was less concerned about reproducing the appearance of natural objects than he was with devising a pleasing pattern.[45]

Nonetheless, when referring specifically to enameling, such distinctions appear to blur once more. The process of engraving on bronze was a continuation and development of an established Iron Age Celtic tradition. Early pre-Roman enameled objects in Britain were primarily used for horse trapping and weaponry and the only color used was opaque red. By the Roman period, enameled objects included many types of bronze brooches and some small vessels and additional colors came into use: several shades of red, blue, and green plus yellow, orange, black, and white.[46]

In focusing on the questions of the production and patronage of enameled jewelry, Cynthia Hahn described a dragonesque brooch produced in the first or second century A.D. as an example of an art that "passed on from Roman soldiers to the barbarians as a popular decorative technique on jewelry"[47] (Fig. 12). Hahn also pointed to the possible reuse in

---

[44] Younger Philostratus. *Imagines* 1.28. Arthur Fairbanks (tr.), (Loeb Classical Library), Cambridge MA, 1931, pp. 108-109.

[45] Catherine Johns, *The Jewellery of Roman Britain. Celtic and Classical Traditions*, London-New York, 1996, p. 31, p. 35.

[46] Frances McIntosh, "A Study into Romano-British Enamelling – with a Particular Focus on Brooches", *The School of Historical Studies Postgraduate Forum*, (*E-Journal Edition*), 7 (2009), p. 4.

[47] Cynthia Hahn, "Production, Prestige, and Patronage of Medieval Enamels", in Colum Hourihane, *From Minor to Major. The Minor Arts in Medieval Art History*, Princeton, 2012, pp. 153. See also https://www.britishmuseum.org/collection/object/H_POA-201 [last accessed 18/11/2024].

Fig. 12 Roman dragonesque brooch from, copper alloy, colored enamels, British Museum, London, © The Trustees of the British Museum (according to Hahn 2012, fig. 1)

objects from Sutton Hoo of Roman *millefiori* glass insets, sometimes also called enamel, in a gem-like way and to their added attraction as valuable *spolia*.[48]

Often, enameled "Roman" objects are found in "non-Roman" areas, indicating that frontiers were not always barriers to the movement of people, objects, techniques, and styles. Therefore, we might conclude that the exchange of objects and techniques between Romans and non-Roman civilizations was probably much more extensive than is usually thought.

Some objects from Roman *Britannia*, such as the jewels from the Rhayader hoard (mid-Wales) of possible local manufacture, feature enamel filigree, a technique from a Hellenistic tradition. Other enameled objects from Gaul and Britain are thought to have been worn by Roman soldiers who were stationed in the provinces as well as by local people. Even though they appear throughout the Roman world, the distribution of finds and the archaeological remains of workshops show that the main centers of production were Britain and Gaul.[49]

Gold and garnet cloisonné objects, such as the famous sword ornaments of the Treasure of Childeric, are considered gifts given from the late Roman imperial elites to the chiefs of the Germanic tribes pressing on the borders of the empire. Gregory of Tours reported that Odoacer and Childeric formed an alliance against the Alamanni, which, according to the customs of the time, may have been an occasion for exchanges of "diplomatic gifts".[50]

Coming to the technical features of cloisonné jewels, Birgit Arrhenius, studying the characteristics of the mounting techniques of the insets within the cloisons – especially the "cement technique" through which the *cloisons* and garnets rest on a chalky binder – hypothesized the

---

[48] *Ibidem*, pp. 154-155. Regarding the findings from Sutton Hoo, Bruce-Mitford himself suggested that the *millefiori* checkerboard-pattern insets in the objects may have been of Roman origin; cf. Rupert Bruce-Mitford, *The Sutton Hoo Ship Burial*, London, 1975-1983.

[49] Cf. the catalog entries of some Roman enameled brooches in the New York Metropolitan Museum of Art: https://www.metmuseum.org/art/collection/search/475394; https://www.metmuseum.org/art/collection/search/465838.

[50] Gregory of Tours, *Decem Libri Historiarum* II, 19. Krusch, Levison (eds.), *MGH*, *SSRM* I, Hannover, 1937-1950.

existence of a "central workshop" in Constantinople, which would have produced both the Childeric treasure found in Tournai and the objects in the Apahida treasure, found in the princely tombs of the Gepid chieftains (Bucharest, National Museum, late fifth century). Arrhenius also speculated on the presence of "satellite workshops" in Italy and Gaul, the location of which, however, she could not specify.[51]

Objections against the hypothesis of a central workshop in Constantinople have been raised by other scholars such as Patrick Périn and Michel Kazanski, who advocated for the hypothesis of a 'pan-Mediterranean' cloisonné fashion that was shared between the Eastern Roman Empire and the barbarian kingdoms of the Western Mediterranean through a network of workshops.[52] In this framework, Ravenna has often been pointed to as a possible location for one of these workshops.[53] After the fourth century and up until the seventh century, the uniformity of high-level Mediterranean goldsmithing and the consequent difficulty in reconstructing the various centers of production largely stems from the aspiration of the emerging classes to imitate the imperial court. In particular, there is clear evidence of a process of assimilation of Byzantine imperial custom by Germanic rulers during the sixth century.[54]

CONCLUSION

Romans knew and mastered the art of glassmaking, as attested by numerous examples of colored glass vessels dating back to the Roman era. Nonetheless, they did not extensively use window glass and did not introduce polychrome stained glass to their windows. In Rome, the entire Italian peninsula, and the Mediterranean regions, during the late imperial period, stained glass lacked any significant attestation.

The transitional phase that led from plain windows glazed with uncolored (that is, greenish or bluish) glass or *lapis specularis*[55] to polychrome stained glass displaying a geometrical arrangement of glass quarries (so-called "mosaic windows") has not yet been sufficiently explained.

---

[51] Birgit ARRHENIUS, *Merovingian Garnet Jewellery. Emergence and Social Implications*, Stockholm, 1985, pp. 120-125. See also Horst W. BÖHME, "Der Frankenkönig Childerich zwischen Attila und Aëtius. Zu den Goldgriffspaten der Merowingerzeit", in *Festschrift Otto-Herman Frey zum 65. Geburtstag*, Hitzeroth, 1994, pp. 69-110.

[52] Michel KAZANSKI, Patrick PÉRIN, "La tombe de Childéric et la question de l'origine des parures du style cloisonné", *Antiquités Nationales*, 28, 1996, pp. 203-209; Michel KAZANSKI, Anna MASTYKOVA, Patrick PÉRIN, "Byzance et les royaumes barbares d'Occident au début de l'époque mérovingienne", in *Probleme der frühen Merowingerzeit im Mitteldonauraum*, Brno, 2002, pp. 159-194; Patrick PÉRIN, Michel KAZANSKI, "La tombe de Childéric, le Danube et la Méditerranée", in Laurent VERSLYPE, *Villes et campagnes en Neustrie* ("Actes des XXVe Journées internationales d'archéologie mérovingienne de l'Association française d'archéologie mérovingienne"), Montagnac, 2007, pp. 29-38.

[53] Michel KAZANSKI, Patrick PÉRIN, "Les tombes de Pouan et de Childéric", in Thomas CALLIGARO et al. (eds.), *L'or des princes barbares: du Caucase à la Gaule, ve siècle après J.-C.*, (exhibition catalogue, Saint-Germain-en-Laye, 2000-2001), Paris 2000, pp. 79-83, sp. p. 83; Marco AIMONE, "Nuovi dati sull'oreficeria a cloisonné in Italia fra v e vi secolo. Ricerche stilistiche, indagini tecniche, questioni cronologiche", *Archeologia Medievale*, 38, 2011, pp. 459-506; Zuzana FRANTOVÁ, *Ravenna: Sedes Imperii. Artistic Trajectories in the Late Antique Mediterranean*, Rome, Brno, 2019, pp. 114-116.

[54] Isabella BALDINI LIPPOLIS, *L'oreficeria nell'impero di Costantinopoli tra IV e VII secolo*, Bari, 1999, p. 242.

[55] DELL'ACQUA, "Finestre invetriate".

The hypothesis proposed here is that cloisonné jewelry may have served as a potential model. The combination of different techniques and materials, as well as the shared use of a malleable metal – lead in one case, gold, silver, or copper in the other – employed to create designs consisting of enclosed forms filled with vividly colored materials that interact with light – colored transparent glass in one case, garnets, glass, glass pastes, or enamels in the other – are key elements that suggest a parallel development for these two art forms. This also implies reciprocal interaction and exchange of techniques and technologies among workshops. Moreover, the data collected thus far indicate that the spread of cloisonné enamel techniques – attested from the seventh century onward and becoming more widespread in the eighth and ninth centuries – parallels the emergence of the first figurative stained-glass windows, although the latter are, unfortunately, attested by only a few examples.

The shared aesthetics between stained glass and cloisonné jewelry fully resonated with the early medieval taste for bright, vivid colors arranged in regular fields, interacting with light and devoid of shading or tonal gradations. This appreciation for the fusion of light and color animated the interiors of churches and palaces, creating images composed of multicolored light.[56]

The earliest stained-glass windows were small-scale objects, featuring panes of colored glass only slightly larger than those used in contemporary cloisonné works. The elevation of stained glass to the status of monumental art, with the enlargement of the windows' size, occurred only with Romanesque stained glass and, especially, later with Gothic art.

Nevertheless, in art historiography, stained-glass art was often relegated to the category of "applied arts", and thus considered a "minor art", until relatively recently. The complex combination of techniques and materials, along with an aesthetic that was distinctly medieval, characterized by vivid and brilliant colors, made stained glass appear more akin to a reliquary or a chest inlaid with precious stones than to a fundamental component of architecture, thereby contributing to its classification as a minor art.

Furthermore, its origins – traditionally located in France and often associated with "barbarian" goldsmithing and jewelry objects – hindered the establishment of any connection with classical art, which never employed stained-glass windows. This association contributed to the overall lack of interest in this art form among the Italian humanists of the fifteenth and sixteenth centuries, with the notable exception of Vasari.

In reality, as we have seen, the boundary between what can be considered to have a "classical" origin and manufacture and what cannot is often fluid, especially when discussing art forms such as jewelry. For example, in certain regions such as Gaul and England – so pivotal for the future medieval development of stained glass – Roman imperial jewelry decorated with enamel, produced in those areas, was used by both stationed soldiers and the local population.

Regarding the fashion for cloisonné garnet jewelry that spread across the continent in Late Antiquity, recent scholarship increasingly supports the hypothesis of pan-Mediterranean

---

[56] Umberto Eco, *Arte e bellezza nell'estetica medievale*, Milano, 1987; Alberto Virdis, *Colors in Medieval Art. Theories, Matter, and Light from Suger to Grosseteste (1100 – 1250)*, Brno and Rome, 2023, ch. 1.

workshops producing these cloisonné items, rather than viewing them as exclusively "barbarian" products, as was long assumed. It is likely that these objects were exchanged and gifted between the elites of the Romano-Byzantine world and those of the new Germanic populations, as some historical sources have suggested. Nevertheless, the locations and contexts of production and dissemination of these items remain highly uncertain.

Many other aspects remain unclear, such as the reconstruction of trade and exchange networks, and the modes of dissemination of these jewels during the height of their production, between the fifth and sixth centuries, the period of cloisonné with garnets. Additionally, questions persist regarding the interaction of various workshops specialized in working gold, precious stones, metal, glass, and enamel during the later stages of the period in question (the seventh to ninth centuries) and the connections with early medieval monastic settings, as suggested by archaeological findings, where objects, tools and materials for working across these various techniques have been uncovered.

Within the framework of the research project presented in this article, future studies aim to delve deeper into these issues and examine the production of stained glass and cloisonné jewelry within a broader framework, encompassing the aesthetic principles shared not only between these two art forms but also with other contemporaneous forms of expression, such as literature, particularly late antique and early medieval Latin poetry.

This interpretative approach follows the studies of Michael Roberts on the so-called "jeweled style", a style characteristic of Late Latin poetry from the fourth to sixth centuries.[57] Building on the recent studies by Mary Carruthers, Jaś Elsner, Jesús Hernández Lobato, and Matthias Friedrich,[58] the ongoing research seeks to contextualize the development of stained glass in Late Antiquity and the early Middle Ages, alongside the parallel evolution of jewelry-making, within a broader framework that also includes Late Latin poetic production.[59] These shared aesthetic and compositional principles reveal intersections, overlaps, and innovations that shaped late antique and early medieval art, centered on the aesthetic concepts of fragmentation, *varietas*, emphasis on details, and preference for vivid, luminous colors. Future publications will address the developments in these investigations.

---

[57] Michael Roberts, *The Jeweled Style*, Ithaca NY, London, 1989. The concept of the *jeweled style* has been explored, questioned, and re-evaluated up to recent times by several authors. See, for instance, Jesús Hernández Lobato, Jaś Elsner (eds.), *The Poetics of Late Latin Literature*, New York, 2017; Joshua Hartman, Helen Kaufmann (eds.), *A Late Antique Poetics? The Jeweled Style Revisited*, New York, 2023.

[58] Jaś Elsner, "Late Antique Art: The Problem of the Concept and the Cumulative Aesthetic", in Simon Swain, Mark Edwards (eds.), *Approaching Late Antiquity: The Transformation from Early to Late Empire*, Oxford 2004, pp. 271-309; Mary Carruthers, *The Experience of Beauty in the Middle Ages*, Oxford, 2013; Hernández Lobato, Elsner, *The Poetics*; Matthias Friedrich, *Image and Ornament in the Early Medieval West*, Cambridge, 2023.

[59] These theses were the focus of a recent interdisciplinary conference, titled "*The Jeweled Materiality of Late Antique/ Early Medieval Objects and Texts. From Cloisonné to Stained Glass to Experimental Poetry (4th–9th Centuries)*", organized by the author and classical philologist Marie Okáčová at the Centre for Early medieval Studies in Brno, as part of the research project "Fragmented Images". They will be further developed in the articles in the conference proceedings, the publication of which is planned for the coming years.