





**THE CONSERVATION OF  
MEDIÉVAL POLYCHROME  
WOOD SCULPTURE**  
HISTORY, THEORY, PRACTICE

MICHELE D. MARINCOLA AND  
LUCRETIA KARGÈRE

THE GETTY CONSERVATION INSTITUTE, LOS ANGELES

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## FOREWORD

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## AN INTRODUCTION TO MEDIEVAL POLYCHROME WOOD SCULPTURE

*A penitent stood in the church at the entrance to the choir and contemplated the image of the crucified Savior. . . . [T]he master who made this work was so skilled that even today it moves the hardest of hearts to pity and makes people feel that they are witnessing the death of Christ with their own eyes.*

Chronicler of Moyennoutiers,  
Vosges (ca. 1020)

*The thoroughly beautiful image of some male or female saint is exhibited, and that saint is believed to be more holy the more highly colored the image is.*

Bernard, Abbot of Clairvaux,  
*Apologia ad Wilhelmum*, 1125

Polychrome wood sculptures, carved figures decorated with paint, metal leaf, and other colorful materials, have a long tradition in many cultures and time periods, but it was during the Middle Ages in Europe that a particularly rich and elaborate expression of the medium arose. Tomb effigies, architectural elements, decorative figures, and other secular sculptures were carved from wood and decorated brightly with paint and gilding. The overwhelming majority of surviving polychrome wood sculpture from this time and place, however, is religious in nature; sculptures depict Christ, the Virgin Mary, biblical scenes, or Christian saints and apostles, and the materials used to create them served an essential role in their original function as cult and devotional images. In addition to figural sculpture, liturgical furniture in wood such as pulpits and candelabras

was also polychromed. Wood was an appropriate medium for making sacral sculpture, since it was seen, like the human body, to be living material with sensitivities and humors (Nielsen 2015, 225). The polychromy fulfilled several critical functions. Color helped differentiate carved elements from each other in candlelit interiors and also served to mark and identify the important figures within an ensemble so that the iconography could be easily read. In the early medieval period (tenth-early thirteenth centuries CE), color may well have fulfilled symbolic and mimetic functions as well; the surviving accounts, like the statement of Bernard of Clairvaux in the epigraph, are suggestive but vague. By the late Middle Ages, blue for the mantle of the Virgin as Queen of Heaven and purple for the cloak of Christ had become traditional signifiers that a polychromer would be expected to employ. Other colors and color combinations, such as red juxtaposed to green, may carry meanings whose symbolic functions are now lost or must be teased out from contemporary religious, heraldic, astrological, and alchemical texts (Shearman 1987; Baxandall 1988, 81-85; Gage 1999, 367-76, 94-97; Clarke 2001, 35-39; Bucklow 2014, 219-20). Medieval polychrome sculpture was often highly mimetic, and the polychromy helped create the illusion that the sculptures could become animate, even sentient. The close imitation of skin, hair, garments, and attributes created by the painter's art, coupled with transfixing amounts of shimmering gold leaf, amplified the emotional connections of the faithful to the images, making the sculptures particularly effective aids to imagination in worship (Boldrick, Park,



**FIG. 1.1**  
Hans Klocker (active in South Tirol, before 1474–after 1500), *Winged Altarpiece and Predella* from the parish church of Terzano (Tramin), Italy, 1485–90. Stone pine and spruce with original polychromy, 239.3 × 157.5 × 47 cm (wings closed) (7 ft 10 in × 5 ft 2 in × 18½ in); W. 286.5 cm (with wings open) (9 ft 4½ in). Bayerisches Nationalmuseum, Munich.

and Williamson 2002, 14–15) (fig. 1.1). The artist's materials were of great importance to the donor, and their type and quality were often specified in contracts (Huth [1923] 1967, 62–64; Jacobs 1998, 175–76); lavish use of the most expensive pigments and metals was an indication of the donor's piety, wealth, and social standing. Polychromy was therefore not ancillary but fundamental to the function and meaning of wood sculpture throughout the medieval period. This chapter introduces the context, function, material history, and facture of these works of art, all of which are a necessary precursor to technical examination.

#### CONTEXT, FUNCTIONS, PRACTICE

It is hard to believe when visiting a museum in the twenty-first century that medieval polychrome wood sculptures were once among the most widespread, familiar, and powerful images available to people in Europe. Collected and displayed today as works of art or still functioning as holy images, they are nevertheless largely marginal to our contemporary interests. And yet in their heyday from approximately 1000 to 1550 CE, painted religious sculpture was found in every church and cathedral of Europe, in both public spaces and the private chapels of wealthy families. Most polychrome wood sculpture was housed inside, to protect it from the elements, but many were likely also placed in outdoor settings and are lost today (Huth [1923] 1967, 59). Statues of the crucified figure of Christ were ubiquitous. At least twenty monumental wooden crucifixes dating from the beginning



**FIG. 1.2**  
*Figures from a Deposition*, early thirteenth century (possibly 1228), Volterra, Italy. Poplar or beech with tempera-based paint, and gold and silver leaf, H: 170 cm (Christ) (67 in); 155 cm (Virgin, St. John), (61 in); 140 cm (Joseph of Arimathea) (55½ in); 120 cm (Nicodemus) (47¼ in). Volterra Cathedral.

of the ninth century to the end of the eleventh survive, which is an astonishing fact when one considers the inherent fragility of their materials (Endemann 2012, 402). Late medieval descriptions of Italian crucifixes locate them throughout churches, on rood screens, against pillars, or mounted in the middle of the floor (Paoletti 1992, 86–89). This abundance is of course due to their iconography, which is central to Christianity. By the twelfth century sculpted (as opposed to two-dimensional) crucifixes were particularly valued for their role in promoting meditation and visions, in which they came alive and embraced the worshipper (Lipton 2005). Life-sized narrative ensembles of the Crucifixion or Deposition, with the crucified Christ accompanied by mourning figures of the Virgin and the apostles, were popular by the end of that century, and widespread production of the groups occurred in Spain and central Italy early in the thirteenth century (fig. 1.2). As common in the Romanesque period were cult images of the Madonna in Majesty, where in accordance



**FIG. 1.3**  
*Virgin and Child in Majesty*, 1175–1200, Auvergne, France. Walnut with paint, tin relief on a lead white ground, and linen, 79.5 × 31.7 × 29.2 cm (31¼ × 12½ × 11½ in). The Metropolitan Museum of Art, Gift of J. Pierpont Morgan, 1916.

with Byzantine models the enthroned Virgin held a Christ Child depicted as a miniaturized adult (fig. 1.3), a number of which survive from central France (Forsyth 1972). These sculpted images could be placed in open tabernacle shrines on top of altar blocks, themselves often carved or otherwise decorated, to form altar ensembles (Kroesen 2014, 28).

During the thirteenth century the iconographic details of polychrome wood sculpture changed to meet alterations in devotional practice. Figures of the crucified King of Heaven were replaced with the *Crucifixus dolorosus*, or suffering Christ, and there was a gradual shift from four-nail to three-nail piercing of the figure's hands and feet (Morgan 2006; Hourihane 2012, 2:230). The hieratic, frontal posture of the Virgin and Child gave way to a wider array of more naturalistic poses and scenes of tender interaction between mother and infant (fig. 1.4). New types of images appeared around 1300 that enhanced emerging forms of meditative, devotional prayer,



**FIG. 1.4**  
Master of Rabenden (active in south Germany 1500–1530), Virgin and Child, 1510–1515, Chiemgau, Germany. Limewood with traces of polychromy, 60 × 35 × 24 cm (23<sup>3</sup>/<sub>8</sub> × 13<sup>3</sup>/<sub>4</sub> × 9<sup>1</sup>/<sub>8</sub> in). The Metropolitan Museum of Art, The Cloisters Collection 1987.



**FIG. 1.5**  
*Pietà* (*Vesperbild*), Rhineland, Germany, ca. 1375–1400. Polychrome poplar (with later paint), 132.7 × 69.5 × 36.8 cm (52<sup>1</sup>/<sub>4</sub> × 27<sup>3</sup>/<sub>8</sub> × 14<sup>1</sup>/<sub>2</sub> in). The Metropolitan Museum of Art, Rogers Fund, 1948. (48.85).

including figures of Christ and the sleeping St. John, the Pietà, and the Man of Sorrows (fig. 1.5). By the fifteenth century, numerous *Gnadenbilder* (miracle-working sculptures), reflecting the vastly expanded cult of the saints and Christian martyrs, were also attracting pilgrims to churches.

Another important format for sculpture was the altarpiece, or retable. Originally an elongated rectangular panel, the form evolved into the familiar boxlike structure containing multiple carved figures by the early fifteenth century (Le Pogam 2009, xx); two early magnificent examples by the Flemish sculptor Jacques de Bearze were created in 1390–99 for the Charterhouse of Champmol and survive today in the Musée de Beaux-Arts, Dijon. In their fully expressed, late medieval form, altarpieces contained sculptures of the Vir-

gin and Christ, together or individually, flanked by groups of saints and apostles, positioned just behind the altars in churches. In northern Europe these altarpieces had hinged wings that were normally kept closed, so that the painted panels on the outside of the wings were the images usually seen; the sculpted interiors were revealed when the wings were opened on feast days (fig. 1.6).<sup>1</sup> In southern Germany and Austria, sculpture also adorned the predella, or sarc, the rectangular box that supported the central corpus of the retable, as well as the superstructure carved with traceries that crowned the ensemble (Kahsnitz 2005, 26–36; Baxandall 1980, 62–69). Southern Netherlandish retables usually consist of a corpus divided into multiple cells that are filled with small figural groups enacting scenes of the Passion; the corpus,



**FIG. 1.6**  
Michel Erhart (ca. 1440/45 - after 1522) and workshop, *High Altar of Blaubeuren*, 1493/4, Ulm, Germany. Wood with original polychromy, H. 445 cm (14 ft 7 in), W. (wings open) 410 cm (13 ft 5<sup>1</sup>/<sub>2</sub> in). Blaubeuren, former Benedictine cloister church.

sometimes shaped like an inverted “T,” may sit on a predella, but the traceries are confined within the corpus frame (Jacobs 1998, 1–6, 238–44). While altarpieces in central Italy were typically painted panels held in elaborately carved frames, fifteenth-century Venetian polyptychs might have sculpted images of the Virgin and Child or a saint in the central niche (fig. 1.7). Sculptures also filled the largest, vertically oriented niches in Castilian *retables mayores* (Berg-Sobré 1989, 139 ff.; Jacobs 1998, 244–51).

In addition to populating large altarpieces, polychrome wood sculptures were hung from church ceilings; placed on side altars, shelves, and wall brackets; mounted in choir enclosures and against columns and pillars; and housed in small tabernacle shrines (Kroesen 2014, 28–33)

(fig. 1.8). Scaled-down versions of altarpieces were placed on side altars and in family chapels and miniaturized for private devotion in the home. Although the stripped-down state of most church interiors today gives little indication, the sheer number of statues they once housed is impressive. By 1488, Ulm Minster, for example, had fifty-one altars, each presumably with a sculpture-containing retable (Baxandall 1980, 62), and a similar number of altarpieces was destroyed by fire in Antwerp Cathedral in 1533 (Jacobs 1998, 3). Documents record twenty-three altarpieces made in Nuremberg workshops between 1488 and 1491 (Brandl 1986, 53). Even in far-flung Iceland, where detailed inventories paint a rich picture of material culture now lost, it is estimated there were approximately two thousand sculptures





**FIG. 1.7**  
Bartolomeo Vivarini (active in Venice, Italy ca. 1440–1500), *Virgin and the Dead Christ with Ascension and Saints*, dated 1485, from the Church of St. Andrew, Rab, Croatia. Carved and painted wood, tempera, oil and gilding on panel, 236.09 × 198 cm (92<sup>7</sup>/<sub>16</sub> × 77<sup>15</sup>/<sub>16</sub> in). Museum of Fine Arts, Boston. (01.4.1-10)



**FIG. 1.8**  
Interior of nave, Church of St. Nicholas, Kalkar, Germany, showing fifteenth- and sixteenth-century sculptures in altarpieces, on piers, and hanging from the vault.

in 1,060 churches by 1400, or one sculpture for every twenty-five persons in the country (Sigurðsson, pers. com., 2015). It has been estimated that barely 10 percent of what had been produced overall survives today (Hägele 2014, 34). (fig. 1.8)

Despite biblical arguments against idolatry and an outright ban of three-dimensional depictions of holy figures by the stricter religious orders, painted and gilded sculptures filled important roles in the Latin West.<sup>2</sup> Their functions were specific and central to medieval Christian worship. Documents from the period make it clear that polychrome wood sculptures could serve as a link, or even actively mediate, between the worshipper and Christ, the Virgin, and the saints (Paoletti 1992, 90; Pegelow 2004; Lipton 2005). Although the extent to which these beliefs were shared is difficult to know, by the late Middle Ages sculpted images of the saints were

thought (by at least some) to represent them in a very real way; sculptures were capable of forming powerful friendships with the social elite and answering or ignoring prayers, for which the statues themselves were accordingly rewarded or punished by the faithful (Duffy 1992, 160; Graves 2008, 38; Angenendt 2010, 24). Polychrome sculpture also occasionally served as reliquaries. Among the most valuable possessions of churches and cathedrals were their relics, the physical remains of saints—bones, hair, blood, and the like—or things that had been in contact with saints' bodies; every church had at least one, since every altar, at least in the early and high Middle Ages, was to be consecrated by a relic housed within (Angenendt 2010, 21). Relics were carefully wrapped in precious textiles and placed inside reliquaries, which both protected their precious contents from theft and created a

splendid container worthy of veneration (Hahn 2012, 23–28). While most of these reliquaries were made from precious metals, relics were deposited in cavities carved into wooden sculpture, as with the Montvianeix Enthroned Virgin and Child at The Cloisters, a practice dating back to at least the tenth century in Europe and continuing until the end of the Middle Ages (Taubert [1978] 2015, 27–29; Liepe 2014, 45). Beginning in the fourteenth century, polychrome sculpture also functioned as movable props in liturgical dramas performed in Italian, South German, and Central European churches, which was made possible by hinged or rotating joints in the shoulders and knees. These adjustments allowed figures of the crucified Christ to be taken down from the cross on Good Friday and transported to the back of the church for “burial”; other figures were used in Epiphany plays and on Ascension Day (Young 1933, 1:164; Haastrup 1987, 133–70; Taubert [1978] 2015, 38–53; Nielsen 2015, 225). One mid-fifteenth-century figure of the crucified Christ from Reggio Emilia even stretched and moaned (Welch 2006). A *Palmesel*, a life-sized figure of Christ riding a donkey, was pulled on a cart in Palm Sunday processions in many towns in Europe (fig. 1.9).

Polychrome sculpture was also produced for noncultic purposes, though far fewer of those survive. The late thirteenth-century tomb figure of Count Palatine Henry II in the Abbey of Maria Laach is one exceptionally well preserved example (Oellermann 1992); a Spanish wooden tomb effigy of a knight of the same period, today missing most of its polychromy, is in the Harvard Art Museums (acc. no. 1936.11). Small-scale items like wooden corbels with figures bearing armorial shields (Metropolitan Museum of Art 16.32.265–266) or *Lüsterweibchen*, chandeliers decorated with antlers and painted wooden busts, were made for the domestic market. The early sixteenth-century *Haushaltbuch* (household account book) of the wealthy Nuremberg merchant Anton Tucher (1458–1524) records the purchase of a number of household items made by local craftsmen, such as wooden chests with carved and painted reliefs and



**FIG. 1.9**  
*Palmesel*, ca. 1500, Franconia, Germany, polychrome limewood, 156.2 × 60.3 × 138.4 cm (61½ × 23¾ × 54½ in.). The Metropolitan Museum of Art, The Cloisters Collection, 1955 (55.24). Although the bottom sections of this figure of Christ on a donkey are restorations, the sculpture gives a good sense of its intended function as a processional image.

a carved and gilded towel rack (Brandl 1986, 54–55). It is thought that late medieval sculptors and painters spent a good deal of time making things other than large-scale religious sculpture, an activity that is incompletely understood because of limited documentation (Huth [1923] 1967, 31; Santi 1976; Baxandall 1980, 102).

Little is known about workshop organization or division of labor until the Gothic period, when guild organizations specific to crafts had become

widespread and influential in the cities of Europe; their regulations provide a wealth of information about the working lives of sculptors and painters (Baxandall 1980, 106–16). The earliest European “book of trades” that survives, Etienne Boileau’s *Livre des métiers* (Paris, ca. 1268), describes “ymagiers-tailleurs” (image carvers) who created crucifixes and large and small figures in wood, ivory, bone, and horn and whose work was painted by “ymagiers-peintres” (De Lespinasse and Bonnardot 1879, 128–29).<sup>3</sup> By this time, there was often a division between the carving and the various aspects of surface decoration; scholars assume this was the case in earlier periods as well, but evidence is lacking (Huth [1923] 1967, 5–22; Brachert 1978–79, 748–52; Jacobs 1998, 210–19; Baxandall 1980, 112–14).

By the fifteenth century most sculptors did not paint their works, being prevented by guild regulations from doing so, but there are important exceptions. The Catalan sculptor Pere Johan (b. ca. 1400) contracted in 1443 to complete an altarpiece for Zaragoza with sculpted and painted figures in the center and painted wings, evidently in the northern manner (Berg-Sobré 1989, 64). Veit Stoss (before 1450–1533) both sculpted and painted wooden figures, since he worked in Nuremberg, which was unique among large medieval cities in that it had no guilds, and painters and sculptors, as members of the “free arts,” reported directly to the city council rather than a guild (Baxandall 1980, 106; Brandl 1986, 51–53). The northern German sculptor Benedikt Dreyer (before 1495–after 1555) polychromed the altarpiece of the St. Anthony confraternity in Lübeck in 1522, and the sculptors Michel Erhart in Ulm (ca. 1440/45–after 1522), Michael Pacher in the Tirol (ca. 1435–1498), and Bernt Notke in Lübeck (ca. 1440–1509) were also painters (Brachert 1978–79, 747). By contrast, it was common for painters to polychrome wood sculpture. The early Netherlandish painters Melchior Broederlam (1350–1409), Jan van Eyck (before ca. 1390–1441), and Rogier van der Weyden (1399/1400–1464) all polychromed sculpture, as did Neri di Bicci (1419–1491) in Florence and Bar-

tolo di Fredi (ca. 1330–1410) (Huth [1923] 1967, 51; Brachert 1978–79, 748; Santi 1976, 184, 241 ff., 353 ff.; Norman 2003, 27) in Siena. A parchment inscription discovered in a cavity in the back of the 1516 crucifix in Steinach identified both the sculptor, Tilman Riemenschneider (ca. 1460–1531) of Würzburg, and the painter, Johann Wagenknecht (n.d.). Riemenschneider also seems to have worked a number of times with the painter-monk Martin Schwarz (active 1485–ca. 1500) of Rothenburg (Marincola 1999, 102–3). By the mid-fifteenth century, it was often the painters who served as the general contractors for large altarpiece commissions, designing the overall schema and contracting the various activities to the different trades. They were sometimes permitted to employ journeymen sculptors in their workshops, as in Basel in 1463 and Munich in 1475, thereby keeping a majority of the work under their direct control (Baxandall 1980, 112). In the fifteenth and sixteenth centuries, a subset of painters known as “preparers” could be hired to take care of the nonfigurative painting, including the preparation of grounds, gilding, and polychromy of sculpture (Huth [1923] 1967, 60; Nadolny 2008b). Additional collaborators on large altarpiece commissions included the carpenters and joiners who made the casings and scrolling decorations and the locksmiths who made the hinges, locks, and keys and installed the completed works in the church (Huth [1923] 1967, 64–65; Brandl 1986, 53).

Altarpieces were mostly likely made in the artists’ workshops rather than on site and then transported in sections, sometimes over great distances, to the church for assembly. Sometimes they did not fit perfectly into their designated spots in churches, as with the high altarpiece in the Minster of Saint Stephen, Breisach, where the wings are not able to fully open in the narrow space (Kahsnitz 2006, 448). Carpenters would sometimes make last-minute adjustments, as evidenced by the 1466 Herlin Altarpiece in Rothenburg (Bachmann, Oellermann, and Taubert 1970, 337). Not every altarpiece was delivered with its polychromy completed; years could pass before this expensive step was finished, and there are

## OVERPAINTING

Medieval polychrome wood sculptures were frequently repainted. New layers of color or metallic decoration were applied either to the complete sculpture or only to some elements of the form, sometimes shortly after the work was made. For example, the *Majestat Batlló*, a mid-twelfth-century crucifix in MNAC in Barcelona, was overpainted quite early in its life with a similar pattern but different colors from the original decoration (Campuzano et al. 2010). There are many cases of multiple campaigns of overpainting on a single sculpture. The reasons for this “treatment”—highly unusual for comparable artworks from the same period such as panel paintings—are linked to the changing function and value of painted sculpture. Alterations of church interiors led to modernization of the sculpture as well, which usually meant new paint layers that allowed the image to conform to new altarpiece surrounds or color schemes (Koller 2008, 73). The updating sometimes went beyond mere polychromy. For example, Counter-Reformation changes in liturgical practice encouraged radically new decoration for cult statues, including textile costumes and wigs, which heightened mimesis (Koller 1996).

Medieval sculptures were sometimes repainted numerous times within the first one hundred years after their creation, with little to no change in the style or color of polychromy (Willemsen 1967, 88). Before repainting, the sculpture’s surface was typically prepared, either by application of glue or another interleaving material or by scraping the old paint (see chap. 9). It is probable that these activities were a form of care. An early narrative of repainting to correct neglect is the *Legend of Notre Dame du Sablon*, recorded by Johannes Gierlemans (d. 1478), which tells of a fourteenth-century repainting and re-gilding of a sculpture of the Virgin and Child by a devout girl in Antwerp, as directed by the Virgin Mary (Campbell 2001, 171). Polychrome sculpture was certainly prone to damage from use and handling—darkening of colors from candle grease, burn marks, and wear are common—and from



**FIG. 1.20**  
Detail, *St. Peter*, Church of Deux Acren, Belgium. This fourteenth-century figure was heavily overpainted in the twentieth century by a well-meaning parishioner (Mercier 2018:499).

environmental factors like wood-boring beetles or changing humidity levels, both of which caused loss to paint and the wood beneath it. (See chap. 4.) Given the limited range of cleaning reagents available before the twentieth century, repainting may have been the best option at hand. Multiple overpaints are frequently encountered on wooden sculpture exposed to some degree to the elements, since the paint serves a protective function.<sup>8</sup>

Other images, in particular those important to a specific cult, seem to have been regularly renewed with paint as an act of devotion, and this practice continues in regions of the world where Catholic worship predominates.<sup>9</sup> The quality of the overpainting varies tremendously (fig. 1.20). Five or more campaigns of overpainting are not uncommon on particularly popular devotional images; an early figure of Christ from Tancre-

mont, Belgium had eight overpaints when it was examined in 1987 (Serck-Dewaide et al. 1990–91; Bertoni-Cren 2013, 256–58). In this aspect, polychrome sculpture bears a close relationship to religious icons of the Eastern Rite, for which stability of iconography takes precedence over preservation of original material. Antiquarianism and the resurgence of interest in the Middle Ages during the late nineteenth century in Europe also contributed to the overpainting of sculpture. As church interiors and their furnishings, including altarpieces and pier sculpture, became the focus of study, those responsible for their care sometimes commissioned painters to create new paint and gilding layers in the Gothic style (Buchenrieder 1990; Steyaert 2013, 95–97; Steyaert 2014, 31–39). Some of these polychromies are startlingly close in quality and facture to medieval decorations and require close scrutiny to be distinguished from them. The large Passion altarpiece of ‘s Herenelderen, created in Antwerp around 1530, stripped in 1900 and repainted by Léon Bressers, is one such example (Steyaert 2013, 99–101). Late nineteenth-century restorers sometimes imitated medieval polychromy so closely that their restoration approached forgery (von Hoensbroech 2007).

Overpaints have an enormous impact on our reception of polychrome sculpture (Mercier 2018, 497–501). As Johannes Taubert has so eloquently argued, the paint and gilding layers are as integral to the meaning of the work as the carving below (Taubert [1978] 2015, 44, 152–55). A thickly overpainted sculpture can bear little resemblance to its medieval state and conveys only partial information about the original context and meaning of the work. It is no simple matter, however, to remove overpainting and reveal medieval layers. Later layers may be desirable to retain in certain contexts, such as in active cult worship where communities value the present appearance of a statue.<sup>10</sup> Overpaints often contain useful information about the history of the sculpture and changes in cult practice over time, for example, in crucifixes where the open eyes of the Romanesque period were later painted as

closed ones (Taubert [1978] 2015, 157–59). In addition, as discussed in chapter 9, the technical challenges of removing overpaints without harming the thin, fragile medieval layers are significant. No repainted sculpture is the same as any other in its sequence and composition of overpaints, so that even experienced conservators confront new problems with each sculpture (Buchenrieder 1990, 33). Paint removal should never be undertaken lightly.

The relatively narrow range of material options for the medieval painter gives little indication of the richness of polychromy throughout the Middle Ages. It was not until the early sixteenth century that new sources for raw materials led to a greatly expanded palette, especially reds like New World cochineal and synthesized blues (the use of the cobalt-based pigment smalt broadened after 1500) and yellows (lead-tin-antimony, or Naples, yellow) (Padilla and Anderson 2015; Berrie 2016, 24–42). Yet, despite this limitation, an astonishing array of techniques was developed to meet the functional, spiritual, and artistic goals of the artist. All too often these efforts are no longer visible. Polychrome sculpture, we know, was frequently overpainted, either because styles had shifted and those responsible for the care of the works wanted to update the colors or because the surface was damaged and restoration involved repainting. Many (although not all) of those overpaints have become valued as documents of social and artistic transformation. The only constant is change.



PART 1

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## EXAMINATION, DOCUMENTATION, AND CONDITION ASSESSMENT

## MAKING MISTAKES THE CLOISTERS' STANDING BISHOP

Many years ago Michele Marincola coauthored articles on certain technical aspects of a late medieval sculpture of a bishop attributed to Tilman Riemenschneider or his workshop that is in the collection of The Cloisters (fig. 1). The senior curator had doubted its authenticity, so she examined the sculpture and working with two scientists and senior conservator completed a good deal of technical analysis. They came to the conclusion that the work was indeed genuine, though the polychromy was probably a later addition. The paint on the gloves and white alb was certainly postmedieval, but so too, they thought, were the flesh tones, silvered chasuble, and gilded cloak with its blue lining. Most limewood sculpture by Riemenschneider was originally painted, but some was not and instead was finished by the artist with a pigmented glaze or varnish (see Case Study 3). At first, they thought the Bishop's silvered and gilded garments, as well as their linings, were part of the sculpture's original decoration. But there were one or two anomalies, aspects that were not typical of late fifteenth-century polychromy. On opening a window, Marincola discerned a dark, glazelike material, identified as charcoal in a gum tragacanth binder, applied directly on the wood (fig. 2). This discovery raised her hopes that the Bishop was originally created as an unpolychromed sculpture. Looking further,



**FIG. 1**

Vellupic tem doloressed es sequis eturi doluptusant ex-plant ut pre core cuptae vendips aeptatur. Um quos unt utempedio ero et, officiis earum dolorumet alit, vendant.

the team found corroborating evidence in the azurite blue layers of the lining. Here SEM-EDS analysis picked up small amounts of barium sulfate mixed with the azurite and lead white in the underlayer. Barium sulfate was not available commercially until the early nineteenth century and was commonly added to lead white paints as a cheap extender. The blue layers, they therefore reasoned, must be at the earliest nineteenth century in date, and since the blue layers seemed to have been applied at the same time as the others, the entire polychromy was probably done in the nineteenth century. They published their findings, adding to the growing technical art history on this, perhaps best-known German sculptor (Marincola and Soultanian 1996; Marincola, Soultanian, and Newman 1997).



**FIG. 2**

Vellupic tem doloressed es sequis eturi doluptusant ex-plant ut pre core cuptae vendips aeptatur. Um quos unt utempedio ero et, officiis earum dolorumet alit, vendant.

A few years later, however, Marincola had a conversation with Marika Spring of the National Gallery in London who mentioned that small particles of barium sulfate—in about the same percentage as that found on The Cloisters' Bishop—are sometimes seen mixed with azurite in fifteenth- and early sixteenth-century paint layers and are considered an associated mineral for the natural blue pigment. This, coupled with some reservations about the initial conclusions by Eike Oellermann, a leading conservator of polychrome sculpture, led Marincola to reconsider the earlier analyses. Today she believes that the polychromy of the chasuble and cloak are, in fact, medieval in date. The presence of a dark, glazelike material directly on the wood may mean that the sculpture functioned for some time as an unpolychromed work.

Why does this matter? For one thing, the articles containing misinformation are in circulation. But more important, Marincola could have made a terrible, irreversible mistake: led by the conviction that the polychromy was not medieval in date, she could have removed it all in a restoration treatment, as was initially discussed. Fortunately, limited time—and growing doubts—prevented the paint removal from being carried out, and the sculpture retains its polychromy today. This is an illustration of the importance of consultation with a number of experts before finalizing treatment decisions.

# NOTES

## CHAPTER 1

- 1 The The Chronicler of Moyenmoutiers is quoted in Paoletti 1992, 89–30. Bernard, Abbot of Clairvaux, is quoted in Bagnoli 2010, 138. Some of the drama of this liturgical event can be recaptured by watching the opening of the wings of Veit Stoss's St. Mary Altarpiece in Krakow, Poland: [www.youtube.com/watch?v=jduIoiETFP8](http://www.youtube.com/watch?v=jduIoiETFP8).
- 2 Both the Cistercians and the Franciscans prohibited three-dimensional sculpture (Belting 1994, 304; Park 2002, 46–47), as did the Byzantine East.
- 3 We thank Professor Robert Maxwell, Institute of Fine Arts, NYU, for this reference.
- 4 The bibliography is extensive. Clarke (2001) has collected over 400 surviving medieval texts that deal with painting technique. Interested readers might start with Theophilus, *De diversis artibus* (ca. 1130); Cennino Cennini, *Il libro dell'arte* (ca. 1390–1435); the fourteenth-century (?) Montpellier *Liber diversarum arcium*; the *Strasbourg Manuscript*, German, ca. 1400; the *Tegernsee Manuscript*, southern Bavaria, ca. 1450–1500. See Nadolny et al. 2012, 20–23 for short descriptions and suggestions for editions.
- 5 Notable exceptions include the Harvard University Art Museums Carved Altarpiece with Virgin and Child and Saints (BR49.306.A-G), Lower Saxony, 1524; the Philadelphia Museum of Art Altarpiece with Scenes of the Passion (1945-25-117, a-s), South Netherlandish, Circle of Peter Coecke? ca. 1532–35; the Museum of Fine Arts, Boston, Altarpiece of the Virgin and the Dead Christ with the Ascension and Saints (01.4), Bartolomeo Vivarini, 1485 (see fig. 1.6; and the Walters Art Museum *Altarpiece with the Passion of Christ* (61-57), Netherlandish, late fifteenth century.
- 6 For example, the Gero Cross in Cologne Cathedral (ca. 970); the Tancremont Crucifix (1051–1100), for which see Serck-Dewaide et al. 1990–91; and the Gerresheim Crucifix (ca. 980), for which see Endemann 2012. On the basis of its C-14 dating, the Volto Santo in Borgo Sansepolcro, Italy, dates to the ninth century CE, though this date has been questioned by Endemann and others (Maetzke 1994; Endemann 2012, 427 n. 18).
- 7 Our thanks to Emmanuelle Mercier for this information.
- 8 The figure of St. Paul on the facade of St. Paul's Chapel on Wall Street in New York City, carved around 1790 from tulip poplar, was repeatedly overpainted as a means of preservation.
- 9 The profession of *Kirchenmaler* (church painter) still exists in Germany, and the polychromy of sculpture is one skill

required. See <http://berufenet.arbeitsagentur.de/berufe/start?dest=profession&prof-id=15534>. Accessed April 12, 2013.

- 10 If polychrome sculpture is transferred to a museum collection on the closing of a church, however, the multiple twentieth- and twenty-first-century overpaints that are often present distort the sculptural forms, creating “garden gnomes,” a rationale for overpaint removal (Mercier 2018, 499).

## CHAPTER 2

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