THE CONSERVATION OF DELLA ROBBIA SCULPTURE: AN EXHIBITION AS INITIATOR OF WORK

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There has been a resurgence of interest in glazed terracotta sculpture from the Italian Renaissance. This article provides an overview of work of the della Robbia and related workshops, summarizing the history, technique, and observations gleaned from the 2016 to 2017 exhibition, Della Robbia: Sculpting with Color in Renaissance Florence.

KEYWORDS: Conservation, Sculpture, Terracotta, Clay, Glaze, Technique, Italian Renaissance, della Robbia, Buglioni, Rustici

1. INTRODUCTION

This article serves as an overview and introduction to a series of articles on the conservation of glazed terracotta sculpture from the Italian Renaissance, presented as a special session on the conservation of della Robbia sculpture in the Objects Specialty Group with related presentations in the General, Research and Technical Studies, and Poster Sessions. Together, this group of articles covers recent studies, treatments, and mounting of important and large-scale works from three generations of the della Robbia and Buglioni workshops. Many, but not all, of these projects were carried out in preparation for the exhibition Della Robbia: Sculpting with Color in Renaissance Florence, which opened at the Museum of Fine Arts, Boston (MFA) in August 2016 and then travelled to the National Gallery of Art, Washington, DC, closing in June 2017.

This was the first exhibition in North America devoted to the della Robbia. In Boston it brought together 46 works from 21 collections: 19 museums and 2 private collections, primarily from the United States but also including six key loans from Italy. At both venues, the exhibition opened with Giovanni della Robbia’s spectacular relief depicting the Resurrection of Christ (fig. 1).

The use of an opaque, bright and shiny tin-opacified glaze applied to terracotta as a sculptural medium was a new form of art developed by Luca della Robbia in Florence in the 15th century. This article presents an overview of della Robbia sculpture: reviewing the different generations, summarizing the technique and its development, and highlighting some of what we have learned from bringing these works together.

The production of della Robbia sculpture in Florence lasted for only a period of about 130 years (fig. 2). Luca della Robbia (1399/1400–1482) invented the technique sometime before 1440, passing the secrets on to his nephew Andrea (1435–1525). Andrea had 12 children, at least 5 of whom became sculptors. His son Giovanni (1469–1529/30) took over the shop in Florence; by the time of Giovanni’s death, the other siblings had either died or moved away, working as sculptors elsewhere in Italy or in France, and the della Robbia shop seems to have closed. Also working in Florence, Benedetto Buglioni (1459/60–1521) somehow acquired the workshop methods from the della Robbias, either, as Vasari tells us, with the help of a woman who worked in the household or, more likely, he was employed in the workshop himself before setting out on his own. Benedetto adopted a young relative, called Santi Buglioni (1494–1576), who took over the business and would be the last of this group to work in the “della Robbia technique” until the style was revived in the 19th century. The Buglioni are now being studied as artists.
in their own right. Other Florentine sculptors, such as Giovanni Francesco Rustici (1475–1554), worked occasionally in the technique.

The works of the della Robbias were highly sought after in the 19th and early 20th centuries and are found in many American museums. Some of the earliest examples to come to the United States were collected by Charles Callahan Perkins in the mid-19th century and donated to the MFA upon its founding in 1870 (Cambareri 2016). Tastes changed, however, and what followed was a long period of neglect—even disdain—through much of the later 20th century. Over the past 40 years, there has been a resurgence of interest in the works of the della Robbias, beginning with Pope-Hennessy’s monograph on Luca (1980) and especially with the major monograph by Gentilini (1992), as well as exhibitions curated by Gentilini in Florence (1998) and Arezzo (2009), and technical publications, most of which are in written French and Italian (Vaccari 1996; Vaccari 1998; Bouquillon et al. 2004; Bouquillon, Bormand, and Zucchiatti 2011). Our understanding of della Robbia sculpture has been greatly enhanced by this recent work. The renewed appreciation of della Robbia sculpture means that both museum and private conservators may find themselves working on this material in coming years.

2. LUCA DELLA ROBBIA

Luca della Robbia was born in Florence around 1400. His parents were in the textile trade and Luca is believed to have been trained as a goldsmith before becoming one of the most celebrated sculptors of the Renaissance, working initially in marble and bronze. When Luca was in his thirties, and Florence’s
cathedral was just completed with the addition of Brunelleschi’s dome, Luca was commissioned to participate in several projects for the interior of the cathedral, along with Donatello, Ghiberti, and others. Luca’s best-known work in marble—his Cantoria (organ loft) depicting children singing, dancing, and making music—was commissioned when he was about thirty years old and placed over the sacristy door at the left side of the crossing opposite another Cantoria by Donatello. Both cantorie have been replaced with modern organs in the Cathedral and can now be seen in the Duomo Museum. Luca also created a set of bronze doors for the Sacrestia delle Messe, set under his Cantoria (1440s–1470s).

In the 1440s, Luca was commissioned to create two large-scale lunettes to go over the sacristy doors depicting the Resurrection and the Ascension (fig. 3). These reliefs, which as far as we know have never been removed, are Luca’s earliest firmly documented use of glazed terracotta as a sculptural medium. Therefore, they are key to understanding the development of the technique.

Fig. 2. Timeline showing the production of della Robbia and related workshops (Courtesy of Richard Newman)

The first of the lunettes to be completed, the Resurrection, is glazed primarily with blue and white (and was also partially gilded). Documents indicate that the officials requested more naturalistic colors (i.e., green trees) for the second. Recent art historical work stresses that Luca was paid not just for these commissions but was paid an additional sum in recognition of his invention.\(^1\) It is important to note that this use of glaze on figurative terracotta sculpture was seen, in its own time, as a new material and was
valued for its innovation. The concept of *ingegno*, or innovation, is explored deeply in the exhibition catalog and was highly valued in the Florentine renaissance (Cambareri 2016).

Luca’s work was also valued for its permanence—the ability of the glazed terracotta to retain its bright, legible colors even when kept outdoors. A good example of this is at Orsanmichele, the former grain hall transformed into a church of the Florentine guilds. Today, one can see replicas of bronze and marble sculptures created for niches around the exterior of the building (the originals, by Verrocchio, Donatello, and Giambologna, have been moved indoors). In the register above the niches, a series of painted (unglazed) roundels are now faded and illegible, while brightly colored glazed terracotta roundels by Luca della Robbia, such as the *Coat of Arms of the of Guild of Doctors and Apothecaries* (fig. 4) continue to shine over the streets of Florence. Luca's roundels at Orsanmichele are also important reminders of the fact that Luca had the ability to use a wide range of colors, much more than the blue and white with which he is associated.

It is also key to recognize that Luca della Robbia’s invention was not only a cheap imitation of marble, as is sometimes claimed, including by Vasari himself (Vasari 1912). Even Luca’s monochromatic white figures of the *Visitation* (see Speranza and Afra, in this volume) represent a whole new type of artistic work with its own innate meaning and qualities, such as reflectivity and shine, creating a new and different visual impact versus either marble or painted sculpture.

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Fig. 3. The interior of the Florence Cathedral in 2016. Luca della Robbia’s *Resurrection* (1445) lunette is seen on the left and his *Ascension of Christ* (1446) on the right. Luca also created the bronze door below the *Resurrection*. His *Cantoria* was originally placed on the left, above the *Resurrection*, but is now in the Duomo Museum.
3. WORKSHOP PRACTICES

So what was Luca’s new invention? How did he create this new form of sculpture? Terracotta, of course, starts with the clay. The della Robbias used a light-colored, calcium-rich clay gathered from the Arno river. They had property along the river, outside of Florence, which was presumably the source of their clay. The 16th century potter and author, Cipriano Piccolpasso, illustrates the digging of clay from a riverbed in his treatise “The Three Books of the Potter’s Art” (fig. 5).

The della Robbia home and workshop, beginning in the 1440s, was in Florence on via Guelfa near via Nazionale (near the present day train station and just inside the city walls)—not far from either the countryside or the center of the city and its cathedral. Luca lived and worked here with his brother and his brother’s family, including his nephew Andrea and, eventually, Andrea’s many children. Individual authorship of della Robbia works is not always apparent. Andrea began working with Luca when he was a teenager and their work was deeply intertwined. In terms of distinguishing their work, it is sometimes said that Luca’s babies are on the left and Andrea’s on the right, or Luca does blue eyes and Andrea does yellow eyes, but that is not always the case. They clearly worked together and they also presumably had other assistants in the workshop. Thus, it is not always possible to clearly differentiate their work.

Presumably it was at this workshop that the clay would be prepared and the sculptures formed, followed by two firings in a kiln: the bisque firing and glaze firing, generally cited to be around 950°C (Vaccari 1998; Bouquillon 2011) and discussed further later. We do not have evidence about the form that their
kilns took or whether saggers were used during firing, but they could have been similar to those illustrated by Piccolpasso (fig. 6).

There would be a limit to the size of the works that could fit in the kiln. The largest pieces from the exhibition that were fired in one piece were Luca’s freestanding sculpture of the Madonna and Child from the Oratory of San Tomasso, approximately 100 cm tall, and the Madonna and Child relief from the Toledo Museum of Art, approximately 74 cm tall (figs. 7, 8).

Larger works had to be fired in sections. The MFA’s relief of the Nativity, created in six sections and assembled after firing, is 89 cm tall (figs. 9a, 9b). This is only somewhat larger than Toledo’s relief, but has much greater depth, suggesting that sectioning would also be dictated by what could be handled or fired safely. The Nativity and the Visitation also demonstrate that Luca was a master of hiding the joins between the individual sections. The joins were well integrated into larger compositions, largely invisible, and are keyed together in such a way that they do not rely on mortar to hold them together.

Another reason for creating works in sections was for ease of transport. During the Renaissance, della Robbia sculptures were commissioned from as far away as Portugal and England and shipped across Europe. Andrea della Robbia created several large-scale altarpieces for the Franciscan Sanctuary of La Verna in the mountains of Arezzo. His Crucifixion altar relief, commissioned for the spot where St. Francis received the stigmata, is the largest altarpiece made, at 600 cm tall, and was manufactured in approximately 185 individual sections.
These large works would be created in Florence and then transported on carts and on boats, to be installed a long distance away. The treatment of Andrea’s relief of *Prudence*, carried out at The Metropolitan Museum of Art for this exhibition, sheds light on how the workshop may have kept track of the arrangement of sections during manufacture and installation (see Riccardelli and Walker, in this volume).

### 4. GLAZE AND CLAY

In bringing together so many related works, the exhibition provided the opportunity to deepen our understanding of della Robbia sculpture through careful observation and ongoing discussions as well as analysis of the glaze and clay. With repeated examination of the glazed surfaces with the curator and other colleagues, we discovered that many of the glaze surfaces (especially the white glazes of Luca and Andrea) had a particular texture—slightly puckered or rippled, similar to thick cream or cellulite. There was also often a very light craquelure and patches of tiny gray specks due to small air bubbles in the glaze (figs. 11a, 11b). This texture was not seen in pieces that were known to be modern, such as an early 20th century version of Andrea della Robbia’s *Adoration of the Child* by the Cantagalli factory (MFA 2016.1463) or in areas of known 19th century restorations on other MFA works.

Glaze analysis was carried out on selected works, building on the extensive work on the della Robbias in France and Italy (Bouquillon et al. 2004; Bouquillon, Bormand, and Zucchiatti 2011) and the MFA’s previous work (Hykin et al. 2007). To date, the MFA has gathered approximately 125 samples from 25...
Fig. 7. Luca della Robbia, *Madonna and Child*, ca. 1450–60, glazed terracotta, 99 × 47.5 × 37 cm. Oratory of San Tomasso d’Aquino, Florence.
Fig. 8. Luca or Andrea della Robbia, *Madonna and Child*, ca. 1465–70, glazed terracotta, 73.7 × 51.2 × 11.4 cm. Toledo Museum of Art. Purchased with funds from the Libbey Endowment, Gift of Edward Drummond Libbey, 1938.123 (Courtesy of Casey Mallinckrodt)
sculptures, including those with firm attributions and some that we know to be modern. The glaze samples, taken from areas of existing damage, generally included a small amount of the clay body. These have been prepared as polished cross sections and are being analyzed by scanning electron microscopy/energy-dispersive x-ray spectrometry (SEM/EDS) by Richard Newman, head of Scientific Research at the MFA. XRF was also used in a few cases when samples could not be taken. We owe a great deal of thanks to the lenders who allowed us to sample, or provided samples of, their objects or shared their own data for comparison. This work is ongoing and will be published in detail in a separate publication. Some examples from this research are discussed here.

A beautiful, almost idealized, example of Luca’s white glaze can be seen in a cross section from the San Tomasso Madonna and Child (figs. 12a, 12b; see fig. 7), believed to be a fairly early example of Luca’s use of glazed terracotta. As observed by Richard Newman, bright white spots of recrystallized tin oxide are evenly distributed throughout a single opaque glaze layer measuring approximately 150 microns thick. There is also a well-formed interaction layer of calcium silicate crystals formed between clay and glaze, formed as calcium from the clay body diffused into the glaze during firing.

The calcium-rich, or marly, clay was typically used for lead glazes throughout the Renaissance. This clay has a similar coefficient of expansion to the lead glazes, providing a good glaze fit, and could be fired over a wide range of temperatures, generally cited as between 750°C and 1050°C (Tite et al. 1998; Vaccari 1998; Bouquillon 2011). The light color of these marly clays after firing can be seen clearly on break edges or on the interiors or backs of the sculptures.
Fig. 10. Andrea della Robbia, *Crucifixion*, ca. 1481, glazed terracotta, 600 × 420 cm. Chapel of the Stigmata Sanctuary of La Verna
Fig. 11a. Detail of figure 9 showing glaze texture; 11b. Detail of figure 8 showing glaze texture.

Fig. 12a. Cross section of white glaze (back-scattered electron image) from Luca della Robbia, *Madonna and Child*, San Tommaso (see fig. 7); 12b. Higher-magnification detail showing small tin oxide particles (< 1 µm), with occasional larger ones; overall tin oxide content, approximately 17%. (Courtesy of Richard Newman)
5. GLAZE REPAIRS AND HOLLOWING OUT

While showing the color and texture of the fired clay, the backs and interiors of sculptures also showed a great deal of variety in how the sculptures were hollowed out.

Reliefs and freestanding sculptures were hollowed with a variety of styles, some more rigid and some more free form and organic. These could not be clearly attributed either to one particular generation or type of relief. Barbour and Olson (2011) have published on six versions of a tondo of the Madonna and Child by Andrea della Robbia, looking at variations and changes that took place owing to replication with molds and also comparing the backs. With a systematic database, it may be possible to build on this work to compare the different ways that the backs were treated with a larger group of sculpture.

In some cases, the presence of frames or mounts meant that the backs were inaccessible. However, we found only two cases in which the backs were left flat, both versions of Luca della Robbia’s Madonna of the Niche—held by the MFA (17.1475; figs. 13a, 13b) and The Met (67.55.98)—both generally dated quite early, about 1445 to 1455.

As seen in figure 13b, we discovered a surprising number of examples of glaze being used as a repair material during manufacture, applied after the bisque firing to reinforce firing or drying cracks. The repair glazes could be white or colored (fig. 14). Glaze repairs had been reported in the literature previously but we were not expecting to see how common a practice this was in the della Robbia workshop—we saw it through all generations of the workshop from Luca and Andrea (see Speranza and

Fig. 13a. Luca della Robbia, Madonna of the Niche, ca. 1445–55, glazed terracotta, 53 × 44.5 × 7 cm. Museum of Fine Arts, Boston, 17.1475; 13b. Back view showing thick white glaze used to reinforce firing cracks on the flat back of the relief (Images © Museum of Fine Arts, Boston, 2017)
Fig. 14. Back view of figure 8. Luca or Andrea della Robbia, *Madonna and Child*, ca. 1465–70, glazed terracotta, 73.7 × 51.2 × 11.4 cm. Toledo Museum of Art. Purchased with funds from the Libbey Endowment, Gift of Edward Drummond Libbey, 1938.123, Note blue glaze used to reinforce a crack in the hollowed back of the relief. (Courtesy of Suzanne Hargrove)
Afra; and Riccardelli and Walker, both in this volume) to Giovanni (fig. 1; also discussed by Bruno et al. in the General Session (unpublished)). In addition, Walker found a mixture of glaze and clay used as workshop repair in Andrea della Robbia’s *St. Michael the Archangel* (Metropolitan Museum of Art, 60.127.2, see Riccardelli and Walker, in this volume).

### 6. GILDING AND COLD PAINTING

It also became apparent that the use of gilding was much more common and extensive than we had previously realized. Approximately 50% of the pieces in the exhibition had traces of gilding or visual evidence of previous gilding—again, covering all generations. While in some cases the gilding had clearly been strengthened or reinforced in the recent past, particularly on haloes, faint traces of gold or remains of mordants were commonly noted as patterns on backgrounds and drapery (see Mallinckrodt, poster, in this volume). One of the best-preserved examples of an overall gilding pattern, which appears to be original, covers the blue background of Luca della Robbia’s *Madonna and Child* relief from the Bargello (figs. 15a, 15b). In many cases, the gilding would have formed large/extensive patterns and had great visual impact.

The use of cold painting over the fired glazes would have also significantly transformed the appearance of these works during the Renaissance, particularly with the addition of red, which could not be made as a glaze. Giovanni della Robbia, the third-generation della Robbia working in Florence, is associated with a

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Fig. 15a. Luca della Robbia. *Madonna and Child*, ca. 1441–45, glazed terracotta, 63 × 50 cm. Museo Nazionale del Bargello, Florence. Courtesy of the Ministero dei beni e delle attrivita culturali e del turismo. (Courtesy of Antonio Quattrone); 15b. Detail of gilding remains on background.
much bolder color palette than his father Andrea or his uncle Luca; traces of red paint found on several of his works show that his use of color would have been even bolder than what we see today. One of the clearest examples is found on Christ’s brown robes on The Brooklyn Museum’s relief of the Resurrection, which were originally painted red (fig. 1; also discussed by Bruno et al. in the General Session). Another example, not shown in the exhibition, is found on Giovanni’s statuette of Abundance at the MFA (46.840), in which traces of red paint under small purple fruit falling from the basket on her head clearly identify them as cherries. In addition, in Giovanni’s relief of St. Donatus (figs. 16a, 16b), the robe, gloves, and the bishop’s hat on his badge should be depicted as bright red, not deep purple. In this case, only one tiny speck of red was discovered on the robe, but the examination was limited by existing restorations and the current mounting of the relief.

Traces of polychromy were also seen on unglazed passages of flesh and hair on works attributed to Andrea, Giovanni, Luca the Younger, and the Buglioni. This suggests that most, if not all, unglazed areas were, in fact, painted at one time.

The loss of gilding, red paint, and polychromy has a significant effect on the way these works are perceived in our time. In 2017, directly after the della Robbia exhibition, there was an exhibition of paintings by Sandro Botticelli and his circle, including Fra Filippo Lippi, at the MFA. The direct comparison of these works—with the same subject matter, from the same time, and exhibited in the same space—was a powerful reminder of the impact of gold and red, driving home what has been lost from these sculptures over the centuries. Thus, while the glazing of della Robbia sculpture has allowed some colors to retain the brightness and shine, we also should be cognizant that this permanence does not apply to all colors.

7. CLAY LAYERING

Another interesting observation about the work of Giovanni is the use of layered clay on two of his largest reliefs, both dating to the 1520s, nearing the end of the workshop’s activity in Florence. The edges of the St. Donatus relief are unglazed and the clay body is visible around the entire perimeter. Most of the thickness of the slabs that make up the eight sections of the relief are a red-colored clay. The presence of red, noncalcareous clay was somewhat alarming when the piece was first seen prior to the exhibition since red-colored clay is not expected in della Robbia works but is often seen in 19th century restorations (as an example, see Bailey, in this volume). However, in this case, the typical light-colored, marly clay was used on the upper surface, closest to the glaze and where it matters most, while the back of the relief is made with a red-colored clay (fig. 17a). We saw this use of distinctly layered clay on one other work in the exhibition, Giovanni’s Resurrection relief (see fig. 1; see Bruno et al., in this volume); as yet, we know of no other examples. We can only guess at the reasons for this use of layered clay. These two works are dated fairly late, toward the end of the della Robbia shop production, and are both large compositions. Was the workshop so busy that they could not keep up with the clay production? Was the red clay cheaper or easier to process? It seems they knew that they needed only to keep the marly clay against the glaze but were perhaps experimenting with how sparingly it could be used.

The glazing of the St. Donatus is also very creative and somewhat odd and experimental: the trees on the right, for example, are growing from a rocky cliff, and the rocks are formed by chunks of porous slag that are embedded in the clay (fig. 17b). This is another good indication that the idea of innovation, or ingegno, did not stop with Luca’s invention but continued through the generations.
Fig. 16a. Giovanni della Robbia, *Saint Donatus Purifies a Well*, ca. 1520s, glazed terracotta, 86.4 × 144.8 × 33.2 cm. Princeton University Art Museum, 2003-237. (Images © Museum of Fine Arts, Boston, 2017); 16b. Detail of the bishop’s hat on his badge. (Courtesy of the author)
Fig. 17a. Detail of figure 16 showing two colors of layered clay at the unglazed edge of the relief; the thickness of clay is approximately 3 cm. 17b. Detail of figure 16 showing the inclusion of slag to depict a rocky cliff. (Both images courtesy of the author)
8. OTHER DELLA ROBBIAS

Several of Giovanni’s siblings were also sculptors. Examples of works attributed to Luca the Younger (1475–1548) and Girolamo della Robbia (1488–1566) were included in the exhibition. These sculptors have been less studied and they show a wide range of adaptations as the family moved beyond Florence. The examples by Girolamo included white glazed busts created while he was working in France, where he had to make use of different raw materials than were employed in the Florentine workshop. Three of these busts appear to be related visually and by the fact that they have areas of purple glaze at the edges (Bust of a Man, J. Paul Getty Museum, 95.SC. 21; Bust of a Woman, Yale University Art Gallery, 1950.138; and Francis I (1494–1547), King of France, Metropolitan Museum of Art, 41.100.245). Furthermore, the white glazes all have a visibly stronger craquelure than what is generally observed on della Robbia sculpture, which can be attributed to the use of a sandier clay with less calcium, although restorations can mask these details.

9. OTHER WORKSHOPS – BUGLIONI

The other Florentine workshop making glazed terracotta sculpture was that of Benedetto Buglioni and his young relative called Santi Buglioni. Benedetto was known for his large-scale altarpieces and, although not included in the exhibition, recent treatments at the Art Institute of Chicago (Adoration of the Shepherds, 1924.218; see Sabino, in this volume) and at the Cleveland Museum of Art (Virgin and Child Enthroned with Saints Francis and Giovanni Gualberto, 1921.1180; Springer, private communication) provide insight into these large-scale works. Works attributed to Buglioni in the exhibition included three white glazed figures: Hope and Charity (both privately owned) and the Met’s bust-length figure of St. John the Baptist. Benedetto’s work has sometimes been considered a lesser imitation of the della Robbia but his works are very beautiful in their own right and he made use of beautifully naturalistic glazes, particularly grays and mottled browns. His work also tends to show more glaze defects, such as glaze crawling or blisters, although it is possible that some of these were, in fact, intentional effects to suggest rough landscapes, for example.

The exhibition also brought together several works attributed to Santi Buglioni, including a colorful, partially glazed Madonna and Child from the Walters Art Museum (27.218) in Baltimore and a grouping of three spectacular life-sized figures of Standing Saints (Saint John of Capistrano, Los Angeles County Museum of Art, M.2007.2a-b; Saint Bernardino of Siena, private collection; and Saint Francis(?), Uffizi Gallery; see Sigel, in this volume; Gat, in this volume). The most important of Santi’s works is the façade of Ceppo Hospital in Pistoia, which was recently cleaned and which also has Giovanni’s final commission. The conservation of this monument is beautifully published by Capecchi et al. (2015). As the last practitioner of this technique and a figure who has been relatively little studied, the work of Santi Buglioni provides an important reference point for understanding this work at end of its use during the Renaissance.

10. OTHER SCULPTORS – RUSTICI

The MFA’s focus on della Robbia sculpture stems directly from the 2003 rediscovery of a white glazed standing figure of St. John the Baptist, which had languished in storage from the time of its acquisition in 1950 until the storerooms needed to be emptied for a large building project in 2003 (fig. 18). The treatment of this important sculpture, now attributed to Giovanni Francesco Rustici, was previously
Fig. 18. Giovanni Francesco Rustici, *St. John the Baptist*, ca. 1505–15, glazed terracotta, 100.3 × 33 × 26.7 cm. MFA 50.2624. (Image © Museum of Fine Arts, Boston, 2017)
published (Hykin 2007), but it is interesting to revisit the findings from that treatment in light of what has been learned since then.

This sculpture is one of the few that was clearly modeled, built up from sausages of clay. It is without an opening at the underside or back, unlike all of the other examples of sculpture in the round in the exhibition. The head and torso were hollowed out by the use of a soft core, or anima, which was removed before firing; vent holes exist at the top of the head and possibly at the back. Separations between the musculature and clothing also suggested that the figure was largely modeled and then dressed, that is, the goat skin was draped over the finished arm. Glaze repairs were not noted, although, as Walker also notes on Andrea della Robbia’s *St. Michael the Archangel* (Ricardelli and Walker, in this volume), the sculptor was not overly concerned about careful luting, or joining added sections of clay. Where a section of drapery from the front of the waist was removed at an unsightly old repair, a fingerprint impressed in the wet clay was uncovered, as were crisp tool marks—both clear evidence that the two sections never made contact.

11. CONSERVATION TREATMENTS AND FUNDING

A great deal of conservation was needed to enable the exhibition to go forward. The most significant and large-scale treatments were, coincidentally, for the three major works from each of the three della Robbia generations: Luca’s *Visitation*, Andrea’s *Prudence*, and Giovanni’s *Resurrection of Christ*. Each of these projects is presented as individual papers in this publication (Speranza and Afra; Riccardelli and Walker; also discussed by Bruno et al. in the General Session). While the exhibition budget (including corporate and private sponsors from both of the host institutions) covered most of the conservation costs, including that of Luca’s *Visitation*, there were also some more unusual and creative funding sources. For example, the Antinori family supported the conservation of the Brooklyn Museum’s *Resurrection*, as this relief was originally commissioned by their Renaissance forebears and includes the life-size donor figure of the Marchese Antinori. The Metropolitan Museum of Art’s own funding of the treatment of Prudence also made them a true partner in the exhibition. The nonprofit organization, Friends of Florence, was also a generous supporter of conservation of the *Madonna and Child* from the Oratory of San Tomasso d’Aquino.

Treatment on the MFA’s own collection had largely been carried out for the exhibition *Donatello to Giambologna: Italian Renaissance Sculpture at the Museum of Fine Arts, Boston* in 2004 and for a new Italian Renaissance gallery in 2007. An exception was an early 20th century relief by the Cantagalli Workshop, *Adoration of the Child* after Andrea della Robbia, which was acquired by the MFA in 2013 specifically for inclusion in the exhibition. Its treatment by Casey Mallinckrodt provided an opportunity to compare the differences in fabrication and quality of a modern revival piece. MFA conservators also carried out some treatment for seven smaller loans, mostly from private lenders, which were able to arrive a few weeks or months prior to the exhibition. Having some works arrive early also allowed for display mounts, such as clips and inserts, to be made prior to installation.

12. EXHIBITION PLANNING

During the planning phase, as the conservator for the exhibition, I felt that it was important to see as many of the sculptures as possible to gather information about condition, mounting, and installation. Thanks to the curator’s long-standing interest in conservation, the catalog would also contain a chapter on “Materials and Technique” and the exhibition included a set of gallery labels with the heading “From the Conservation Laboratory.” It would have been ideal to see each of the works prior to writing for the
catalog. However, the time frame was extremely tight—catalog writing was due a year before the opening, while some loans were not secured until much later.

In the end, despite the lack of a travel budget for conservation planning, I managed to visit ten of the US museums and private lenders to see most of the loans. But it was only in March, just four months before the opening, that I was able to visit Florence with our curator, Marietta Cambareri, to see these works in situ so that we could make the final arrangements for their inclusion in the exhibition. This trip, for parts of which we were joined by Wendy Walker and by art historians Catherine Kupiec and Rachel Boyd, allowed discussions and observing together, which was profoundly important to my own understanding of della Robbia sculpture and its original context.

In order to relay information about each individual object and its special requirements for planning handling, display, or installation needs, I found it easiest to pull all the relevant information into a PowerPoint document that included dimensions, weight, images of front and back of each sculpture, any existing mount, and any special concerns or needs. This was shared internally and with the venue, providing a clear visual means for understanding the needs of each sculpture.

13. CONCLUSION—FUTURE STUDY

Given the widespread interest in della Robbia sculpture in recent years, it is probable that there will be a continued focus on treatment and research. Many of the works in North American collections were acquired in the late 19th and early 20th centuries and there are many with aged and failing restorations. I am hopeful that the observations gathered in these articles, such as the possible presence of gilding or cold painting, glaze repairs, workshop markings and notations, variations in the use of clay and glaze, and the often subtle surface qualities of the glaze, can help to inform the examination and treatment of more works. Even with all of this added information, there are many secrets of the Renaissance sculptors’
workshops that remain a mystery. (Experimental archeology could be a promising direction to attempt to understand questions of production, such as whether saggers were used in the kilns.)

These works are also far removed from their original contexts; thus, comparison with firmly dated works that remain in situ in Italy is key. This would provide fixed data points for comparison of clay and glaze analysis, and may also help clarify questions about original mountings and installations. In depth study of firmly documented monuments in Italy would be extremely useful to create firm points of comparison. Andrea's iconic roundels from Ospedale degli Innocenti have been recently treated and are presented here (see Speranza and Afra in this volume). Specifically, the study of Luca's first commissions in the Duomo from the 1440s would provide a very important earliest reference point as well as his roundels at Orsanmichele, and the recently treated reliefs at Ceppo Hospital by Santi Buglioni dating to the mid-16th century provide the endpoint for this production in the Renaissance.

Building on work being carried out at other institutions, this exhibition provided an exceptional opportunity for conservators, art historians, and scientists to work together to further our understanding and appreciation of these Renaissance sculptors and their contributions. This special session on della Robbia sculpture, with eight related articles, has provided a wonderful in-depth exchange of information, ideas, and questions that I hope we can continue to work on together.

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Finally, I am very grateful to the organizers of AIC and OSG who welcomed and supported the idea of a dedicated session on della Robbia sculpture.

NOTES

1. As noted by Catherine Kupiec (2017), the final payment to Luca for his Resurrection was for his industry and invention (pro sua industria et invention).

2. Wendy Walker is to thank for this and many other observations.
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FURTHER READING


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