

Artemisia Gentileschi in a Changing Light



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THE MEDICI ARCHIVE PROJECT SERIES

Artemisia Gentileschi in a Changing Light

EDITED BY

SHEILA BARKER



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Mary Magdalene in Ecstasy by Artemisia Gentileschi: A Technical Study

Christina Currie, Livia Depuydt-Elbaum, Valentine Henderiks, Steven Saverwyns, and Ina Vanden Berghe

Introduction

In July 2014, Artemisia Gentileschi's *Mary Magdalene in Ecstasy* (c. 1620–25, private collection, presently with the Koninklijk Museum voor Schone Kunsten, Antwerp) came to the Royal Institute for Cultural Heritage in Brussels for examination and conservation treatment, shortly after its acquisition at Sotheby's auction house in Paris (fig. 1). The painting was previously unknown, having lain hidden in a private collection in the South of France for at least two generations.¹ Gianni Papi was the first to recognize it after an old black and white photograph in the Fototeca Briganti (Siena, Italy), which he subsequently published in *The Burlington Magazine* in December 2011 as part of his review of the Artemisia Gentileschi exhibition at the Palazzo Reale in Milan (fig. 16).² The Briganti image shows the painting during a former restoration. Following its rediscovery, Papi confirmed the attribution and dating in 'Artemisia ritrovata', the penultimate chapter of his latest book on the impact of Caravaggio on his contemporaries.³



Fig. 1. Artemisia Gentileschi, *Mary Magdalene in Ecstasy*, c. 1620–25, 80 × 106 cm, oil on canvas, private collection (with the Koninklijk Museum voor Schone Kunsten, Antwerp), before current conservation treatment. (Photo © KIK-IRPA Brussels)

As a complement to Papi's stylistic approach, the present study will focus on the materials and techniques of the painting and will attempt to place it in the technological context of early seventeenth-century Rome. It will explore Artemisia's development of the composition from her first strokes through to the final paint layers, revealing, amongst other things, a significant change of mind that raises questions on contemporary attitudes to sensuality in the depiction of the Magdalene. The conservation treatment will be discussed in an appendix at the end of this article.

Original Support and Format

The painting measures 80 × 106 cm. The original support is a single piece of plainly woven canvas, with a thread count of 10 warp and 13 weft threads. The original canvas, being relatively fine, is probably linen rather than hemp.⁴

The edges of the original canvas were scrutinized for clues so as to establish whether or not the rather unusual landscape format is indeed original. Caravaggio's lost *Mary Magdalene in Ecstasy* from 1606, of which several copies exist (See Papi, fig. 7), was probably one of Artemisia's most important sources according to Gianni Papi, yet it had a portrait format.⁵ The original turnover edges of Artemisia's canvas are missing, probably having been removed by a previous restorer during the lining procedure following customary practice. However, there are remnants of the original canvas on the right and upper tacking edges (fig. 2). These are free of ground and paint, attesting to the fact that they are indeed the remains of the original tacking edges. The left and bottom tacking edges show no such evidence. The X-radiograph⁶ was examined for further clues, particularly for signs of cusping, also known as garlanding (fig. 3a).⁷ A cusping pattern should appear all around the borders of a canvas painting if it has not been cut down. In the case of Artemisia's *Magdalene*, cusping is clearly visible on the



Fig. 2. Detail, upper tacking edge: remnants of the original canvas. (Photo © KIK-IRPA Brussels)

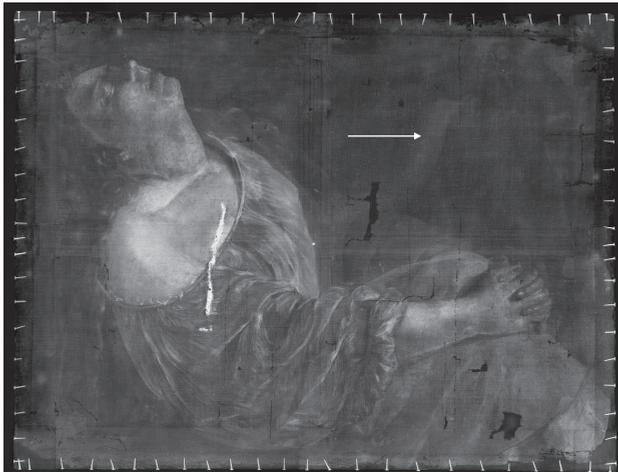


Fig. 3a. X-radiograph, processed with Platypus software to reduce the effect of the stretcher bars; arrow indicates probably palette knife mark from ground application. (Photo © KIK-IRPA Brussels)

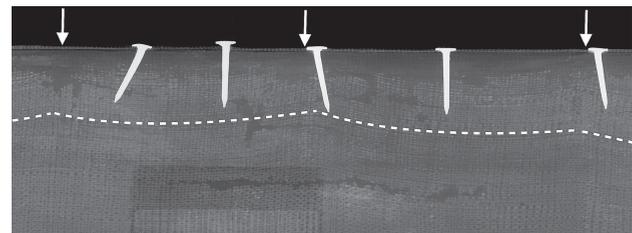


Fig. 3b. Detail of fig. 3a showing cusping at top edge, highlighted with dotted line; former nail holes indicated with arrows. (Photo © KIK-IRPA Brussels)

top and right sides (fig. 3b), and although slightly less pronounced at left and bottom, it is also present on these sides. This suggests that a centimeter or so of canvas might be missing from the painting at left and bottom, but not much more, which means that the current format of the painting is indeed the correct and original one.

The canvas is currently stretched on a modern, keyable stretcher. It would originally have been stretched up on a wooden strainer without expandable joints.⁸

Preparatory Layer: Double Ground

The canvas was most likely first sized with animal glue, to reduce its porosity and to protect it from the subsequent oil-based priming, also known as the ground. The ground layer was applied to the canvas after it was stretched on its strainer, as evidenced by the lack of ground on the remains of the original tacking edge at the top and right sides (fig. 2).

Close inspection of the paint surface with a microscope, particularly at the edges and in losses, shows that the ground is made up of two distinct layers: a lower, almost black layer and an upper reddish-brown layer. This is confirmed in two cross-sections, one taken from the highlight in the purple shawl and the other from a highlight in the hair (figs 4a.1, 4a.2, 4b.1, 4b.2). These also show that the upper layer was applied in two coats that can be distinguished when the cross-section is viewed in ultraviolet fluorescence mode.

The sample from the Magdalene's shawl clearly shows the double-ground structure (figs 4a.1, 4a.2). Scanning electron microscopy coupled with energy dispersive X-ray analysis (SEM/EDX) reveals that the darker lower ground contains red ochre, lead white, and a little vermilion.⁹ It also contains large quantities of a black pigment, which did not register in SEM/EDX. The upper ground layer, which appears to have been applied in two sessions, contains red ochre and lead white.

A second sample from a light-ochre-colored highlight

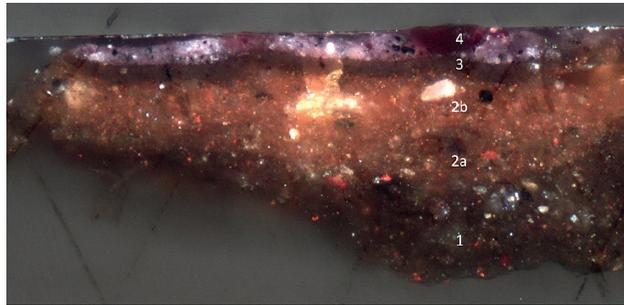


Fig. 4a(1). Highlight in purple shawl, cross-section in normal light. Layer 4: Light purple layer: organic lake (Al-rich substrate detected), lead white (Pb); layer 3: Dark underlayer: ochre/umber richer in Fe than ground layers (Mg, Al, Si, K, Fe, Ca), lead white; layer 2: Second ground (likely applied in two layers): red ochre (Na, Mg, Al, Si, Fe, K, Ca), lead white (Pb); layer 1: First ground: red ochre (Na, Mg, Al, Si, Fe, K, Ca), lead white (Pb), a few particles of vermilion (Hg). (Photo © KIK-IRPA Brussels)

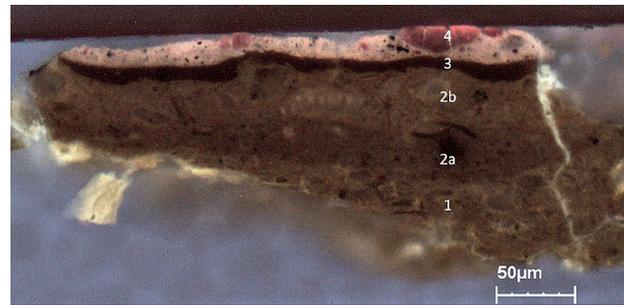


Fig. 4a(2). Highlight in purple shawl, cross-section under UV light. Layer 4: Light purple layer: organic lake (Al-rich substrate detected), lead white (Pb); layer 3: Dark underlayer: ochre/umber richer in Fe than ground layers (Mg, Al, Si, K, Fe, Ca), lead white; layer 2: Second ground (likely applied in two layers): red ochre (Na, Mg, Al, Si, Fe, K, Ca), lead white (Pb); layer 1: First ground: red ochre (Na, Mg, Al, Si, Fe, K, Ca), lead white (Pb), a few particles of vermilion (Hg). (Photo © KIK-IRPA Brussels)

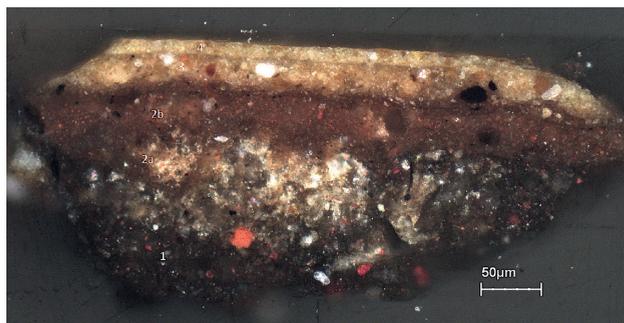


Fig. 4b(1). Highlight in hair, cross-section in normal light. Layer 4: Light yellow: lead white (Pb), yellow ochre (Al, Si, Fe); layer 3: Yellow: yellow ochre (Al, Si, Fe), bone black (Ca, P), lead white (Pb), a particle of red ochre (-. Medium rich layer?); layer 2: Second ground (likely applied in two layers): red ochre (Na, Mg, Al, Si, Fe, K, Ca), lead white (Pb); layer 1: First ground: red ochre (Mg, Al, Si, Fe, K, Ca), lead white (Pb), a few particles of vermilion (Hg). (Photo © KIK-IRPA Brussels)



Fig. 4b(2). Highlight in hair, cross-section under UV light. Layer 4: Light yellow: lead white (Pb), yellow ochre (Al, Si, Fe); layer 3: Yellow: yellow ochre (Al, Si, Fe), bone black (Ca, P), lead white (Pb), a particle of red ochre (-. Medium rich layer?); layer 2: Second ground (likely applied in two layers): red ochre (Na, Mg, Al, Si, Fe, K, Ca), lead white (Pb); layer 1: First ground: red ochre (Mg, Al, Si, Fe, K, Ca), lead white (Pb), a few particles of vermilion (Hg). (Photo © KIK-IRPA Brussels)

in the Magdalene's hair shows the same layer structure (figs 4b.1, 4b.2). The almost-black lower ground contains red ochre, lead white, a little vermilion, and black particles, while the upper ground, applied in two sessions, contains red ochre and lead white.

A third sample from a dark purple part of the shawl contains the upper ground only, applied in two coats; the lower ground is missing from the sample. Pigments identified in the upper ground include lead white and an ochre pigment.

The medium of the double-ground layer was determined by analyzing a minute sample from the purple shawl with gas chromatography-mass spectrometry (GCMS).¹⁰ Through this process, the medium proved to be linseed oil.

The X-radiograph might give a clue as to how the ground was applied. In the upper right quadrant of the composition there is a sweeping whitish mark that probably relates to the use of the palette knife (fig. 3a, mark shown with arrow). Since the mark is radiopaque, it must contain a dense pigment or pigments. This could come from either layer of ground, as they both contain lead white.

The use of a palette knife for the application of the ground layer in canvas painting was recommended in a late-seventeenth-century manuscript on Venetian painting techniques by Giovanni Battista Volpato (1633–1706).¹¹ Volpato's advice on the nature of the ground layer dovetails neatly with that employed in Artemisia's *Magdalene*. He advises the application of two coats of



Fig. 5. Theodore Turquet De Mayerne, Illustration of a priming knife, British Library: Sloane MS 2052, fol. 5r.

ground, the first made from unground ‘terra da bocali, terra rossa, et un poca di terra d’ombra’ (potter’s earth, red earth and a little umber), mixed with linseed oil, stirred over a fire and applied with a knife, the second made from the same colors but with the ingredients previously ground and no boiling of the oil.¹²

The use of a palette knife for the application of grounds was by no means confined to Italy. Theodore Turquet de Mayerne, physician to the French and English courts, diplomat, chemist, and chronicler of Flemish, Dutch, and English artists’ practices in the first half of the seventeenth century, describes and illustrates a priming knife in his treatise on painting (1620–46), noting in the margin that the source of the information was a Walloon primer living in London (fig. 5).¹³

The main function of the ground, particularly the lower layer, was to help counteract the absorbency of the textile support and to provide an even working surface. Certain pigments, such as lead white and earth pigments, both present in Artemisia’s ground layer, would have improved the drying properties of the oil medium.

Dark Grounds in Contemporary Painting

It is not known whether Artemisia applied the ground herself or whether she purchased the canvas ready-primed. Since the dark ground layer plays an important part in the overall mood of the work, giving it a brooding, meditative feel, it is likely that the choice was Artemisia’s own. In this, she would have followed the example of her father Orazio Gentileschi, whose *Danaë* (c. 1622–23, Cleveland Museum of Art), for example, has a brown ground that is sometimes deliberately left exposed in shaded areas.¹⁴

That Artemisia favored brown grounds is explicit in her *Allegory of Painting* (*La Pittura*) (fig. 6; Kensington Palace, Collection of Her Majesty Queen Elizabeth II),

painted in the 1630s, in which she depicts herself against a brown-primed canvas that she is starting to paint. Nicola Ann MacGregor, discussing the recent restoration of Artemisia’s *David and Bathsheba* (c. 1650–52, Florence, Palazzo Pitti), commented that it is painted on a dark ground.¹⁵ Artemisia’s late *Susanna and the Elders* (1652, Bologna, Pinacoteca Nazionale; see Modesti, fig. 11), was also found to have a brown ground.¹⁶ More analysis is needed to make generalizations about her usual practice, although it is clear from these examples that she did opt for dark grounds at various points in her long career.

In her choice of a dark ground for the *Magdalene*, Artemisia was also following contemporary Italian practice. Caravaggio had already recognized the emotive potential of dark grounds. According to Claudio Falucci, Caravaggio at the turn of the century abandoned light-gray grounds in favor of the darker ones that typify his late paintings. Falucci described the pigments used as mainly earth colors, including yellow ochre, red and brown earths and umber, as well as some lead white, calcite, quartz, and carbon black.¹⁷ Larry Keith’s study of three canvas paintings by Caravaggio in the National Gallery, London, shows that each is painted on a dark ground.¹⁸ Giancarlo Sidoti’s cross-sectional analysis of Caravaggio’s *Martyrdom of St Matthew* (1599–1600) reveals at least two different layers of brown ground, the last of which is the darkest. He also analyzed the 1608 *Annunciation* by Caravaggio that proved to have three layers of brown ground.¹⁹ Elisabeth Martin’s extensive research on the grounds of canvas paintings dating from 1600 to 1640 in various European artistic centers defined six prevalent types. Type five is composed mainly of brown or yellowish-brown earth tones mixed with chalk and/or lead white,²⁰ and is widely represented in Italy. The ground of Artemisia’s *Magdalene* fits well within this group. Examples listed by Martin include Giovanni Baglione’s series of the *Muses* (painted in Rome in 1618–20) whose canvases have a brown ground applied in two layers;²¹ Caravaggio’s *Fortune Teller* (c. 1596; see Locker, fig. 9) which has a lower light-brown layer made of earth pigments and a second brown layer containing paint scrapings and coarsely-ground lead white; and Nicholas Poussin’s works made between 1624 and 1640 whilst he was in Rome.²² According to Karin Groen, Van Dyck employed a brown clay ground for his paintings of the *Balbi Children* and *Agostino Pallavicini*, both made whilst in Italy (c. 1625–27), but when in Antwerp and London, he opted for a traditional double ground with a red lower layer and a gray upper layer.²³ Groen also noted that Dutch painter Michael Sweerts appears to have only painted on dark clay grounds while in Rome.²⁴

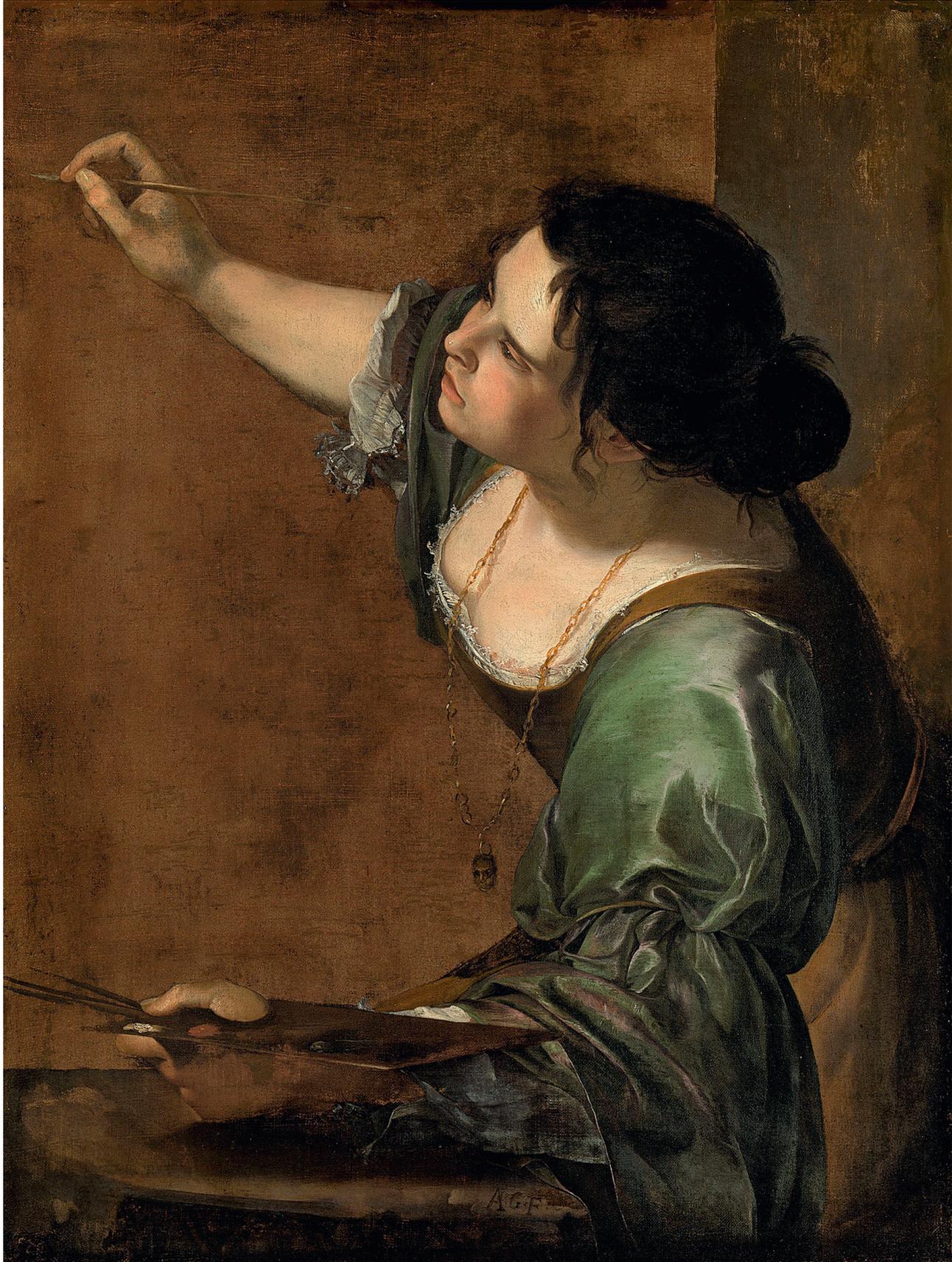


Fig. 6. *Allegory of Painting (La Pittura)*, c. 1630s, London, Kensington Palace, Collection of Her Majesty Queen Elizabeth II.



Fig. 7. Infrared reflectogram, with arrow indicating reserve in black background for hair. (Photo: © KIK-IRPA Brussels)

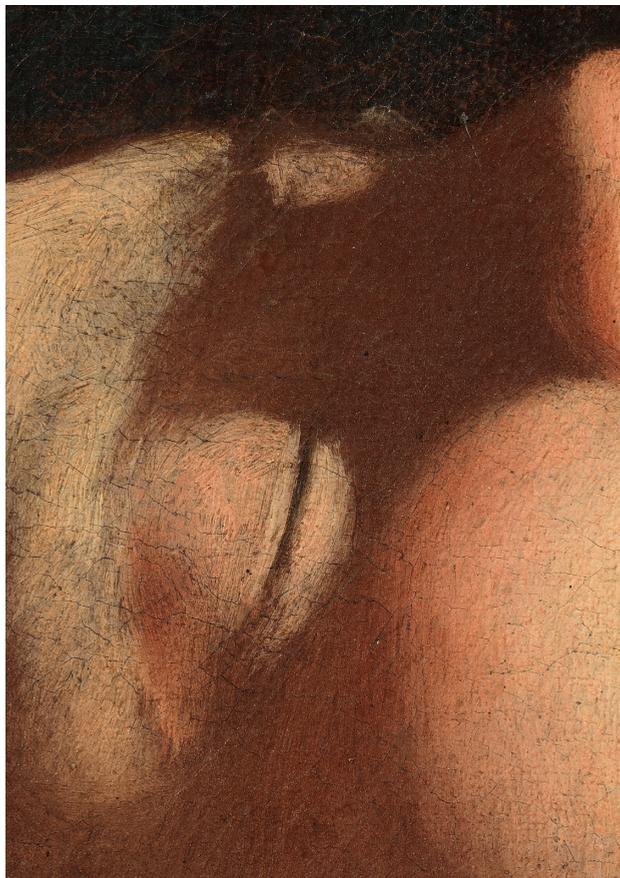


Fig. 9a. Detail of face, in normal light. (Photo: © KIK-IRPA Brussels)



Fig. 9b. Detail of face, x-radiograph. (Photo: © KIK-IRPA Brussels)

Laying-in the Design

No underdrawing can be detected in Artemisia's painting using either infrared reflectography or X-radiography.²⁵ Nor are there incised lines or *abbozzo* markings in lead white, both of which are, conversely, encountered in the work of Caravaggio.²⁶ Artemisia is nevertheless likely to have made some sort of rough indication of the composition on the reddish-brown ground layer at the start of the painting process. She could have sketched her design in white chalk or painted it with a light color such as yellow ochre, both of which would be invisible to infrared and X-ray.

It is worth pointing out that no drawing lines of any kind are visible on the prepared canvas that is depicted in Artemisia's *Allegory of Painting*, although she is clearly about to paint as she is already holding a brush. This would suggest that her tendency was to use brush and paint to introduce her composition onto the canvas.

We do not know the extent to which Artemisia used preparatory drawings, and whether she would have made one for the composition of the *Magdalene in Ecstasy*, as none survive. There is, however, verbal evidence of her use of preparatory drawings. Judith Mann has related how, towards the end of Artemisia's life, on 13 November 1649, she wrote a letter to Don Antonio Ruffo in Sicily in which she stated that she would no longer be sending drawings to clients, as some had cheated her, citing the case of the bishop of Sant'Agata who had commissioned another artist to paint a work based on her drawing of souls in purgatory.²⁷ This tells us that it was Artemisia's practice to make presentation drawings of her more complex, multi-figured inventions, but whether this extended to simple compositions such as the one of the *Magdalene in Ecstasy* is debatable.

Painting Technique: Build-up of the Paint Layers

Artemisia started by painting in the black background, leaving a generous reserve for the hair, a stage clearly visualized in infrared reflectography (fig. 7). The black strokes of the background paint stop abruptly at the point at which the hair was to be painted (see arrows, fig. 7). She painted the hair last, overlapping the black background in places.

She worked her paint in a direct manner, modeling freely on the brown ground. She used opaque paint mixtures in one or two thin layers, leaving the ground

deliberately exposed to serve as shadow and thus conferring a unifying element to the painting. She also created cool half-shadows in lighter areas by applying white paint thinly over the dark ground, for example, in the blouse (fig. 8). This subtle effect is all the more evident now that the yellowed varnish layer has been removed.

In the face and hands, Artemisia lightly modulated the shadows with hints of lighter or darker paint, skillfully integrating the warm-brown ground into the color scheme (figs 9, 10). Her adept exploitation of chiaroscuro modeling creates the painting's emotionally charged atmosphere. She worked up to the highlights, bridging the intense chiaroscuro transitions with adroit brushwork. She left the ground completely exposed at the edges of the forms and in the deepest shadow, and, as with the white blouse, she created half-shadows by exploiting the thinness of pink flesh-paint over the brown underlayer. She also warmed up the brown shadow area under the eye with delicate, dark-red modeling strokes.

In the purple shawl, she started by applying an underlayer containing medium-rich dark umber on the dark ground. She then applied her mauve highlights and deep, purplish shadows. This layer structure can be seen in cross-sections from the highlight (figs 4a.1, 4a.2) and shadow respectively. Artemisia painted the hair in a yellow ochre-based paint, which she then highlighted here and there with a lighter version of the same mixture. A simple two-layered structure can be seen in the cross-section from a hair highlight (figs 4b.1, 4b.2). The slightly thicker, lower paint layer consists of yellow ochre, bone black, lead white, and brown particles, while the lighter upper layer contains yellow ochre and lead white, but no black or dark-brown particles.

Influence of Caravaggio on Technique

Artemisia's painting technique in the *Magdalene in Ecstasy* recalls that of Caravaggio, who had a profound impact on her father, Orazio Gentileschi, in the 1610s. According to Judith Mann, Artemisia would only have seen some of Caravaggio's paintings during her early artistic education in Rome, but would have absorbed the artist's visionary style through her father's work before 1610. Mann points out that later on, after her return to Rome in 1620 as an established painter, she would have been able to see more of Caravaggio's paintings first-hand.²⁸

Larry Keith, who examined Caravaggio's *Boy Bitten by a Lizard* (painted in Rome in the late 1590s and now in the

National Gallery, London), describes how its red-brown ground functions as shadow:

The ground is clearly visible in several areas, and was of great importance in providing a ready-made middle tone in much of the painting of flesh and hair ... the shoulder, chin and neck shows this more clearly; the brown tone of the ground, visible in the unpainted area between the shoulder and background paint, is left exposed or lightly veiled with darker paint to provide much of the half-shadow in the modeling of the inner shoulder and collarbone, chin and shadowed cheek.²⁹

This passage could as well be used to describe Artemisia's painting technique in the *Magdalene*.

Pigment Analysis

X-ray fluorescence analysis (XRF) gives us a basic idea of the pigments that are present.³⁰ The palette proves

to be somewhat limited and dominated by earth colors. The lips are painted with red ochre, lead white, and a hint of vermilion; darker parts also reveal traces of azurite. A muted-yellow highlight in the hair, as would be expected, contains yellow ochre and lead white. The dark-red part of the right ear contains red ochre, traces of vermilion, and lead white. A dark-blue shadow in the blouse contains azurite, red ochre or an umber earth, traces of vermilion, and lead white. A red highlight in the blue shadow of the blouse reveals red ochre or an umber earth, azurite, and lead white. The dark blue of the backrest contains azurite, a red ochre or umber earth, traces of vermilion, and lead white. The white blouse consists of lead white. The ochre-colored dress is made up of yellow ochre, lead white, chalk, zinc, and lead-tin yellow.³¹ The yellow ray of light in the upper left corner reveals lead white and red or yellow ochre.³² The green foliage in the upper right contains lead white, red or yellow ochre, and a green copper containing pigment or azurite, and zinc.³³ The dark purple shawl contains lead white, red ochre or yellow ochre, and azurite. The flesh areas are made up of lead white and red ochre.

Analysis of the pigments making up the lighter parts of the mauve shawl was initially elusive. A mixture of red and blue, which gives purple, might be expected. However, XRF testing did not pick up copper, an indicator of azurite blue; moreover, there are no blue particles visible at the surface when examined with the Hirox microscope (fig. 11). No vermilion red was found either.

SEM/EDX analysis of the cross-section identified aluminum in the deep-red particles, which suggests the substrate of a lake pigment. In order to analyze the type of lake, high-performance liquid chromatography (HPLC) was performed on several separate tiny scrapings from



Fig. 8. Detail of white blouse, with arrow indicating brown ground layer left deliberately visible to serve as shadow. (Photo: © KIK-IRPA Brussels)

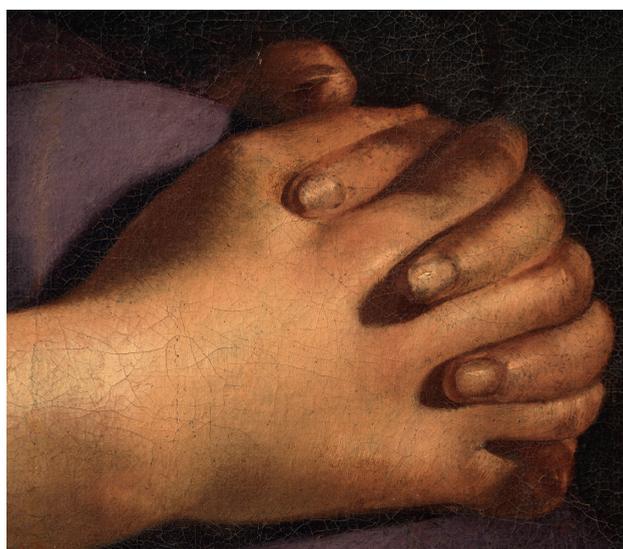


Fig. 10a. Detail of hand in normal light. (Photo: © KIK-IRPA Brussels)



Fig. 10b. Detail of hand, x-radiograph. (Photo: © KIK-IRPA Brussels)

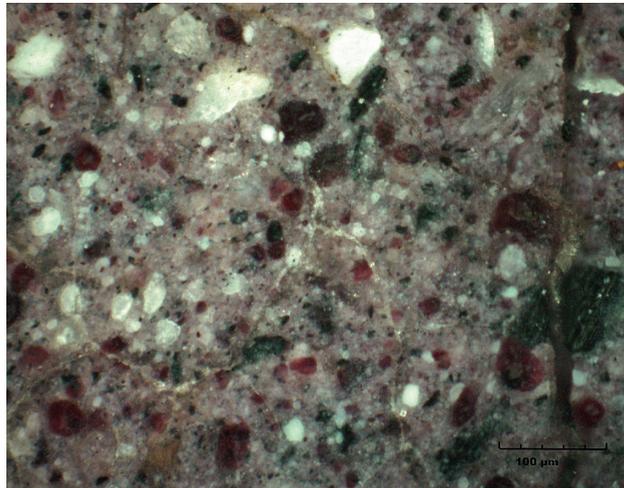


Fig. 11. Close-up detail of the paint surface of the mauve shawl, with black, white, and red lake particles, Hirox microscope, 500x. (Photo: © KIK-IRPA Brussels)

the light-mauve paint.³⁴ Both carminic acid and ellagic acid were detected, and the presence of carminic acid proves that the lake is cochineal, a pigment derived from the cochineal scale insect. Several types of cochineal were available in the early seventeenth century, including Polish cochineal (*Porphyrophora polonica* L.), Ararat cochineal (*Porphyrophora hamelii* Brandt) and cochineal from South and Central America, particularly Mexico (*Dactylopius coccus* Costa). By far, the most likely type used in the *Magdalene* is the last one, which was cultivated on the fruit-bearing prickly pear cactus (genus *Opuntia*) in Mexico and the Peruvian Andes (fig. 12).³⁵ The Spanish first imported it from the New World in 1523, strictly controlling its importation into Europe and generating vast amounts of revenue from its sale.³⁶ Mexican cochineal easily dominated the European market by the early seventeenth century, thanks to its low cost and high dye power – tenfold that of the kermes insect (*Kermes vermilio* Planchon) and much more than that of the Eurasian species of cochineal.³⁷ The presence of ellagic acid in the sample is a sure sign that the pigment was prepared from silk shearings, as silk was usually charged with organic tannin-rich plant material such as galls or sumac.³⁸

Artemisia must have mixed the translucent red cochineal lake with black and white to produce the attractive mauve tint for the *Magdalene's* shawl. SEM analysis of the cross-section and HPLC analysis of a paint scraping shows that to obtain the dark purplish color of the shadows of the shawl, the artist mixed azurite blue with the same red cochineal lake as that used for the light-mauve areas.



Fig. 12. José Antonio de Alzate y Ramírez, *Indian Collecting Cochineal with a Deer Tail*, from *Essay on the Nature, Cultivation, and Benefits of the Cochineal Insect [Memoria sobre la naturaleza, cultivo, y beneficio de la grana]*, 1777, plate 7. (Photo: Newberry Library, Chicago; call number: Vault Ayer MS 1031)

Medium Analysis

To determine Artemisia's paint medium in the *Magdalene*, and in particular whether or not she chose a less-yellowing oil for the white blouse, GCMS analysis was carried out on three tiny samples. Sometimes artists chose poppy or walnut oil in place of linseed oil to obtain more vibrant whites; for example, Titian often selected walnut oil for lighter colors,³⁹ and Van Dyck painted the *Balbi Children* with linseed oil in the sky and foliage, but with walnut oil in the flesh paint.⁴⁰ In fact, the paint medium of all three samples from Artemisia's *Magdalene* – taken from the white blouse, the purple shawl, and the ochre dress – proved to be linseed oil.

Toning Down of the Sensuality of the Image during Painting and other Modifications

There are four noticeable modifications that attest to the fact that Artemisia's creative process continued as she painted (fig. 13).

The most meaningful adjustment is the reduction in the amplitude of the white blouse, resulting in a suppression of the bust (figs 14a, 14b, 14c). Artemisia originally painted the blouse so that it fell softly around the breasts, defining them in a sensuous way, as revealed in the X-ray image (fig. 14b). She completely masked this initial conception by painting over it with the purple shawl, the ochre-colored bodice, and the auburn hair. This was clearly a late change of mind. The part of the purple shawl painted over the white blouse appears lighter than the rest, an unintended effect probably more pronounced now than when the painting was first finished. The pose is nonetheless still somewhat provocative, given the presence of the 'slipping blouse', to borrow a phrase from R. Ward Bissel,⁴¹ but considerably more modest than originally conceived.

Other modifications include the profile of the ochre skirt, which was first painted with a more angled slope; the Magdalene's clasped hands, which Artemisia lowered in

relation to the reserve she had left for them in the background paint; and a long fold in the purple shawl, which originally would have given more definition to the profile of the right knee but was suppressed during painting.

There are other female subjects by Artemisia, all painted during the late 1610s and 1620s, in which the bust has been partially concealed in a later stage. One is the *Mary Magdalene* at the Cathedral of Seville, in which the Magdalene's left breast has been hidden by a brownish veil.⁴² Mary D. Garrard published an X-radiograph detail to show the original conception, as well as an illustration of another version of the same composition in a private collection, showing the bust exposed.⁴³ Garrard commented that the 'conspicuous difference between the works is the veil that circles the figure's left shoulder, which is much broader in the Spanish picture, completely covering the juncture of arm and breast'. She noted further that 'close inspection of the original reveals that the right half of this drapery is an addition to the painting, obvious in its darker color and cruder brushstrokes. In the French version, we see the arm and breast in specific detail, as if they had been painted from life'. Speculating, Garrard proposed that 'the additional drapery was most likely a condition of the picture's admission into the cathedral, in accord with the strict decorum enforced by the Spanish Catholic Church'.⁴⁴



Fig. 13. Image showing changes carried out during painting. (Photo: © KIK-IRPA Brussels)

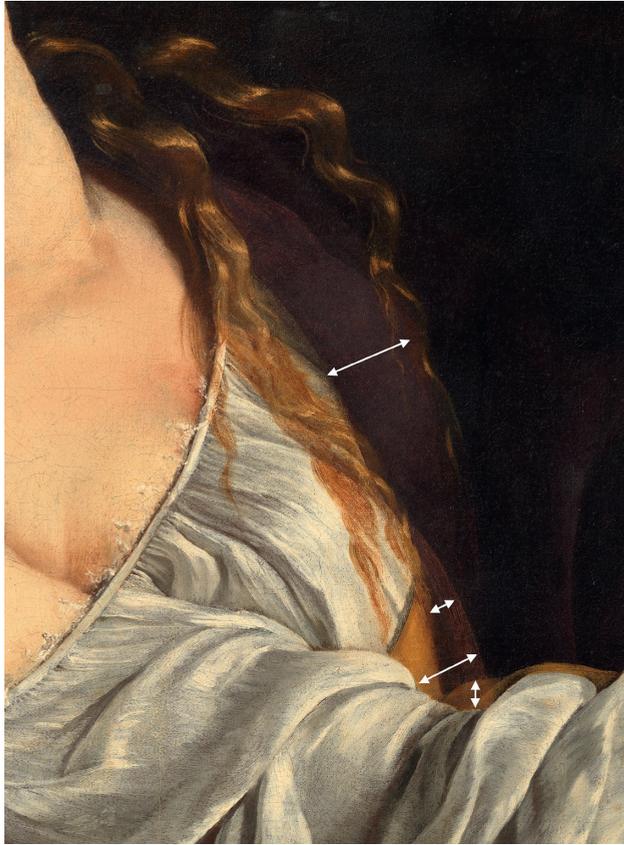


Fig. 14a. Reduction in amplitude of white blouse, in normal light. (Photo: © KIK-IRPA Brussels)



Fig. 14b. Reduction in amplitude of white blouse, x-radiograph. (Photo: © KIK-IRPA Brussels)

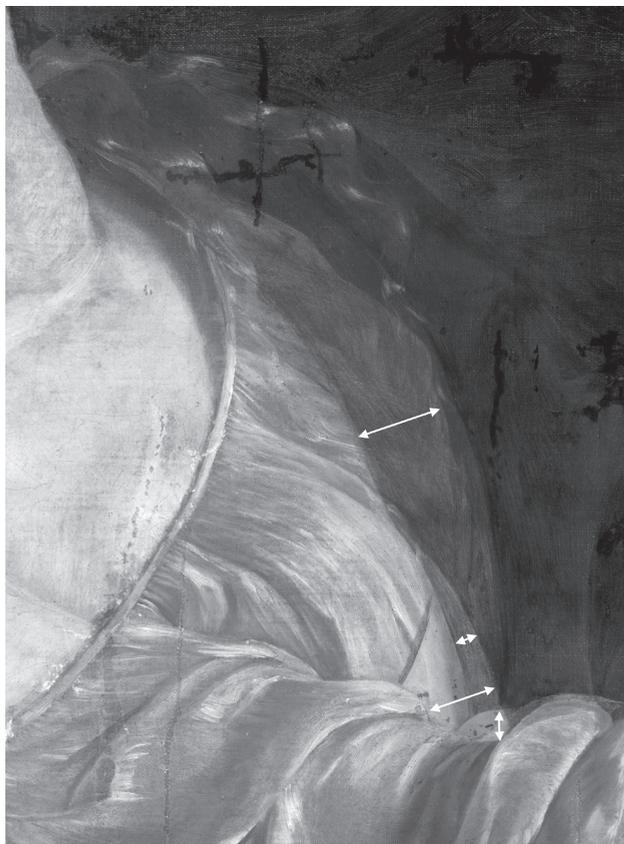


Fig. 14c. Reduction in amplitude of white blouse, infrared reflectogram. (Photo: © KIK-IRPA Brussels)



Another case is the *Judith and Her Maidservant* (c. 1623–27) in Detroit, in which there are transparent veils over the busts of both women.⁴⁵ However, rather than seeing the veils as a means of toning down the sensuality of the image, Bissel interpreted them as a ‘stratagem of simultaneously covering up and revealing ... for no other apparent reason than to entice’.⁴⁶ Bissel also observed that in Artemisia’s *Lucretia* (c. 1611–25, private collection; see Garrard, fig. 11), a drapery has been added over the left breast in what he terms as a ‘prudish cover-up’, although he considered it to be a later addition, unlike Keith Christiansen, who saw it as an original modification by Artemisia.⁴⁷

Artemisia also seems to have adjusted draperies during painting for aesthetic reasons. For example, in the Pitti’s *Judith and Her Maidservant* (c. 1612–19), the X-radiograph reveals a different initial arrangement for the sleeve and bunched drapery of Abra’s dress, as pointed out by Keith Christiansen.⁴⁸

Is Artemisia’s *Mary Magdalene in Ecstasy* a Self-portrait?

Whether or not the *Mary Magdalene in Ecstasy* represents Artemisia herself is a question for debate. The following artworks are considered to represent her likeness: *Head of a Female Martyr* (private collection, c. 1615, fig. 15b), the Hartford *Lute Player* (c. 1615–17; see Locker, fig. 4), the *Portrait of Artemisia Gentileschi* engraved by Jérôme David (c. 1620s, fig. 15c) after a lost self-portrait by Artemisia, and the Kensington Palace *Allegory of Painting (La Pittura)* (fig. 6). The last work, however, is not seen as an accurate self-portrait by most art historians, as it does not resemble the likeness of the Jérôme David engraving, although Mann has pointed out that it does include the ‘wide forehead, full cheeks, ample chin, and bow lips’ of the engraving.⁴⁹

In addition to these established likenesses of the artist, several other paintings could also include self-portraits based on similarities with the facial typology in the above-mentioned works. These include *St Catherine of Alexandria* (Florence, Uffizi, c. 1614–19), *Judith Beheading Holofernes* (Naples, Museo di Capodimonte, c. 1611–13), *Cleopatra* (formerly Milan, Amadeo Morandotti, c. 1611–12), and *Cleopatra* (Fondazione Cavallini-Sgarbi, c. 1620–25).

The Magdalene in the present work fits comfortably with these two sets of paintings, therefore offering another possible self-representation. Artemisia knew her own body and features better than any other, and so it would have been natural that she used them – even

subconsciously – in her portrayals of female heroes and saints. Patricia Cavazzini suspects that she used a mirror from early on, partly because of the fact that she was cooped up in the house with little access to the outside world and to other painters’ works. Regarding the *Susanna and the Elders*, 1610 (Pommersfelden, Graf von Schönborn collection), Cavazzini has wondered whether she was using ‘her own body, admired and copied from a mirror’, adding that ‘the notion of Artemisia owning a large reflecting surface is not implausible, as Ann Sutherland Harris has come to believe, since Cosimo Quorli owned a full-length metal mirror that hung together with his paintings’.⁵⁰

Model for Pose and Clothing

Although she could have included her own likeness in the face and shoulders of the Magdalene from various mirror studies and from memory, the sideways pose would not have been possible to hold while drawing or painting from a mirror. The complex drapery folds would also have been tricky to manage, unless she was working after a separate model. It is therefore likely that Artemisia used a live model, either to make a sketch of the pose, or during painting, whilst at the same time basing the face on her own.

From Artemisia’s rape trial testimony, we know that Orazio Gentileschi spent considerable time drawing after live models.⁵¹ These were later used and recycled in several paintings. Having learnt her trade from her father, Artemisia herself most likely made sketches after live models as part of her working practice. Cavazzini cited Filippo Baldinucci’s statement that Artemisia painted many portraits in her youth in Rome, and added that during the trial, two are mentioned specifically: a portrait of her neighbor’s boy, done for pleasure, and another, a commissioned work, of a man called Artigenio.⁵²

During her Florentine period, it is possible, but not proven, that Artemisia was accorded the same privileges given to her fellow male artists at the Accademia del Disegno. The Academy’s program for its members included the study of anatomy, which was complemented by life-drawing, and the study of inanimate objects, particularly drapery.⁵³

On her return to Rome in 1620 as a successful, independent artist, Artemisia would have had the means to pay models.⁵⁴ She certainly used them towards the end of her life. Judith Mann has pointed out that:

[I]ater in her life, in a letter written on June 12, 1649, to her Sicilian patron Don Antonio Ruffo, she lamented the difficulties of completing a commission for a figure painting



Fig. 15a. Artemisia Gentileschi, *Mary Magdalene in Ecstasy*, detail.
(Photo: © KIK-IRPA Brussels)



Fig. 15b. Artemisia Gentileschi, *Head of a Female Martyr*, c. 1615,
private collection.



Fig. 15c. Jérôme David, *Portrait of Artemisia Gentileschi*, engraving
after a painted self-portrait by Artemisia Gentileschi, Paris,
Bibliothèque Nationale de France, Cabinet des Estampes.



Fig. 16. Photograph taken during a former conservation treatment, date unknown, Siena, Fototeca Briganti.

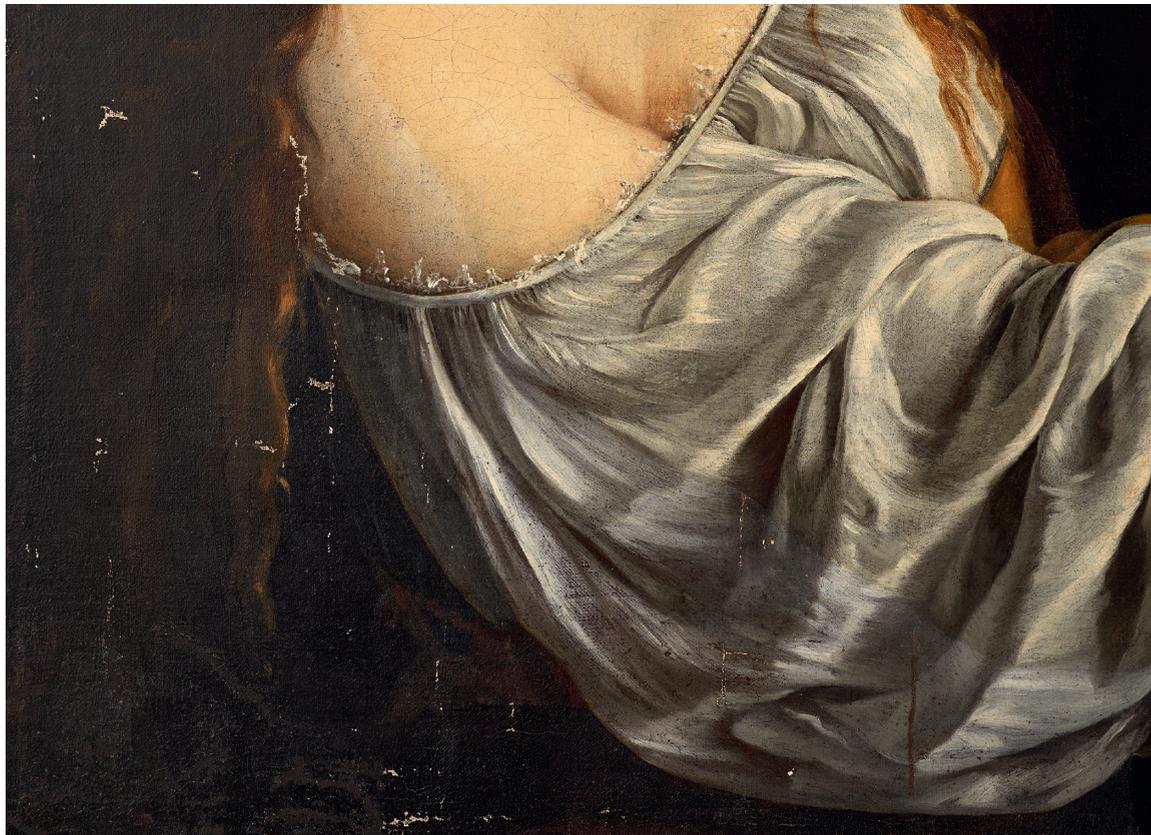


Fig. 17. Detail of blouse during varnish removal, conservation treatment 2015. (Photo: © KIK-IRPA Brussels)

given the problem of finding suitable models: 'Because out of the fifty women who undress themselves, there is scarcely one good one'.⁵⁵

Garrard cited a slightly later letter to Ruffo, dated 13 November 1649, in which Artemisia again referred to the use of female models:

I assure Your Most Illustrious Lordship that these are paintings with nude figures requiring very expensive female models, which is a big headache. When I find good ones, they fleece me, and at other times, one must suffer [their] pettiness [*piccolezze*] with the patience of Job.⁵⁶

Conclusion

This technical study has lifted a veil on the techniques and materials making up Artemisia Gentileschi's *Mary Magdalene in Ecstasy*, a newly discovered masterpiece painted at the height of her creative powers in the early 1620s. The use of a dark preparatory layer, which helps set the emotionally charged tone of the painting, can be clearly traced to the influence of Caravaggio and, more directly, her father. She skillfully exploited the dark ground as both mid-tone, where it was sometimes left bare, and half-shadow, where it was thinly painted. Her painting of the Magdalene's shawl with its pale-mauve highlights and rich, purple shadows based on cochineal red and azurite blue, set against the cool white blouse and the deep shadow of the background, shows complete mastery of the chiaroscuro style.

An unexpected discovery from the X-radiograph was that Artemisia significantly reduced the amplitude of the white blouse during painting, suppressing the definition of the breasts. This was surely an intended toning down of the sensuality of the image, for reasons as yet unclear since the original patron of the painting is not known.

Appendix: Condition and Conservation Treatment

The original canvas, prior to its treatment at the KIK-IRPA, had been lined with two identical lining canvases. Both had the appearance of linen and were characterized by an open plain weave, with the same weave counts: 8 warp and 8 weft threads per square centimeter. They were quite brittle and most likely applied as part of the same lining cycle. Such an open canvas

weave is typically Italian, suggesting that the previous lining was carried out in Italy.

The old glue-paste lining adhesive was extremely hard and brittle.⁵⁷ In some places it had seeped through the open-weave canvases onto the reverse, where it was visible. The two linings were starting to delaminate from the original canvas at the right edge. The tears, which were visible in raking light, were no longer properly supported. The original canvas has a number of long, narrow, vertical losses. The shape of the losses suggests that the painting may have been rolled at some point, cracking in the process and damaging the canvas support.

It is useful to compare the X-radiograph taken today (fig. 3) with the image from the Fototeca Briganti in Siena, published in *The Burlington Magazine* by Gianni Papi, showing the painting during a former restoration (fig. 16). A large, white, radiopaque loss left of center is also faintly visible in the Briganti image. It is probably an earlier repair that was left in place during the last restoration. The fact that it is radiopaque suggests that it is lead-white based, unlike the other fillings. The photograph is dated to the 1970s, according to the Fototeca Briganti,⁵⁸ however, this probably represents the date at which the photograph was introduced into the library and not the date of the restoration. The yellowed and cracked varnish layer removed during the current cleaning was most likely applied much earlier than the 1970s.

Livia Depuydt-Elbaum led the new conservation campaign, and also carried out the cleaning and retouching. The treatment began with varnish removal, using mild solvents and working progressively using small swabs. Most of the retouching was soluble at the same time as the varnish. The uppermost retouching and later toning layers were underlain by a red, water-soluble, opaque base-tone that spilled over onto the original paint. This in turn covered an older restoration, comprising lead-white-based fillings and locally applied oil-based retouching. These later interventions were all removed, exposing the various old tears and canvas inserts, as seen in the Briganti photograph.

The original cool nuances of white and gray in the Magdalene's blouse and the lively texture of Artemisia's brushwork were gradually recovered during cleaning (fig. 17). Traces of vegetation in the upper right also became slightly more visible, as well as a ray of light over the head of the saint. The face has some abraded areas due to a previous aggressive cleaning, and there is some wear in the dark background. Some of the brushwork is slightly less pronounced today than it would have been at the outset due to a former lining treatment.

After cleaning, the old, degraded lining canvases were removed, the tears reglued, and the old inserts replaced with new ones. The original canvas was then relined with a finely woven linen canvas using a synthetic adhesive. Marie-Annelle Mouffe carried out this part of the treatment.

The final stage of treatment was the filling of the losses with a chalk and animal-glue putty, followed by retouching, and then varnishing. Most of the retouching was done with watercolor, and the remainder was carried out with dry pigments in a synthetic resin. A thin layer of dammar varnish was then applied to protect the painting and to saturate the colors, particularly the deep purples and blacks. Dammar varnish, made from a natural resin, gives a rich and saturated appearance to the paint without undue glossiness.

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NOTES

- * We would like to thank our colleagues in photography and scientific imagery for their high quality images: Sophie De Potter (infrared reflectography), Catherine Fondaire (X-radiography), and Stéphane Bazzo (photography).
1. Sotheby's sale catalogue, 'Tableaux et dessins anciens et du XIX^e siècle', Paris, 26 June 2014, Lot 24, 'Artemisia Gentileschi, *Marie Madeleine*'.
 2. Gianni Papi, 'Artemisia Gentileschi. Milan', *The Burlington Magazine*, 153 (December 2011), pp. 846–47 and fig. 83. Papi's prescient passage reads as follows: 'The formidable *Praying Magdalene*, which I only know through a photograph in the Fototeca Briganti at Sienna, where it is labeled as Artemisia, fits well into the painter's catalogue with its innovative and powerful pose, and perhaps dates from c. 1620–25' (ibid., p. 846).
 3. Gianni Papi, *Spogliando modelli e alzando lumi. Scritti su Caravaggio e l'ambiente caravaggesco* (Naples: Edizioni Paparo, 2014), pp. 207–15. His arguments on the painting's artistic context and the sources for the composition are further developed in his chapter in the present volume.
 4. No fiber analysis was carried out to confirm this, mainly because linen and hemp fibers, both of which were used in Rome during the period, are difficult to distinguish with a microscope. Jo Kirby has affirmed that it is even more difficult when the threads are deteriorated and when coarser types of flax fiber were used. See Jo Kirby, 'The Painter's Trade in the Seventeenth Century: Theory and Practice', *National Gallery Technical Bulletin*, 20 (1999), p. 25 and n. 125.
 5. Papi first drew attention to the similarity between Caravaggio's lost *Magdalene* and Artemisia's version: Gianni Papi, *Spogliando modelli e alzando lumi. Scritti su Caravaggio e l'ambiente caravaggesco* (Naples: Edizioni Paparo, 2014), p. 208; see also Papi's chapter in this volume. The Klain copy (Rome) is considered to be the best one after the lost original (Papi, *Spogliando modelli e alzando lumi*, p. 63). As reported by Dario Pappalardo in *La Repubblica*, 24 October 2014, Mina Gregori believes to

have identified the lost original Caravaggio painting in a European collection.

6. The radiography was carried out using high-resolution industrial film (GE Structurix D7). The film strips were scanned with an Array corporation Laser Film Digitizer 2905HD and the image digitally assembled using Adobe Photoshop. The effect of the stretcher bar was reduced using Platypus software (see project-platypus.net).
7. Cusping is the scallop-like distortion of the original canvas from the points of the original nail holes (original nail holes are marked with arrows in fig. 3a).
8. Until the mid-eighteenth century, expandable stretchers with keys did not exist. Antoine-Joseph Pernety wrote that 'on a inventé depuis peu une maniere de faire des chassis qu'on appelle *chassis à clefs*; ils sont préférables en tout aux anciens chassis, parce qu'au moyen des clefs, on tend la toile plus fortement, & toutes les fois que la sécheresse la relâche' ('there was recently invented a way of making stretchers that are called keyed stretchers; they are preferable to the old stretchers, because with the aid of keys, the canvas is stretched more strongly, and [as can be done] every time that dryness causes it to slacken'). Antoine-Joseph Pernety, *Dictionnaire portatif de peinture, sculpture et gravure* (Paris, 1757), cited in Barbara A. Buckley, 'Stretchers, Tensioning, and Attachments', in *Conservation of Easel Paintings*, ed. by Joyce Hill Stoner and Rebecca Rushfield (Abingdon and New York: Routledge, 2012), 148–60 (p. 150). Buckley, 'Stretchers, Tensioning, and Attachments', notes that keyed stretchers were not widely used until the late eighteenth century.
9. SEM/EDX analyses were carried out on a Jeol 6300 SEM-EDX with Si(Li) detector (Pentafet, Oxford Instruments). Prior to analysis, an ultra-thin layer of gold was deposited by low vacuum sputtering on the cross-section to make it electrically conductive.
10. A TraceGC gas chromatograph coupled to a PolarisQ mass spectrometer (both from Thermo), with sample introduction by pyrolysis (EGA-PY3030D pyrolysis

unit, Frontier Lab), was used for binding media analyses. A Supelco SLB-5ms (20m × 0.18mm × 0.18µm) chromatographic column was used for the chromatographic separation of the different compounds.

11. Mojmír Hamsík, 'Painting on Canvas. The Technique of Italian Painting of the 17th and 18th Century. The System of Ground Layers', *Technologia Artis*, 3 (1993), 103–06.
12. Giovanni Battista Volpato, 'The Mode to be Observed in Painting', in *Medieval and Renaissance Treatises on the Arts of Painting*, ed. and trans. by Mary P. Merrifield (Mineola, NY: Dover Publications, 1999), pp. 730–33.
13. Théodore Turquet de Mayerne, *Le manuscrit de Turquet de Mayerne. Pictoria, sculptoria et quae subalternarum artium*, ed. by Marcel Faidutti Marcel and Camille Versini (Lyon: Audin Imprimeurs, 1974), pp. 15, 17.
14. Conservation report, The Cleveland Museum of Art, 1978, cited in *Orazio and Artemisia Gentileschi*, exh. cat., ed. by Keith Christiansen and Judith W. Mann (New York: The Metropolitan Museum of Art; New Haven and London: Yale University Press, 2001), p. 194. Other paintings by Orazio Gentileschi cited as having dark grounds include the following: *David Contemplating the Head of Goliath* from c. 1610–12 in the Galleria Spada in Rome (Christiansen and Mann (eds), *Orazio and Artemisia Gentileschi*, p. 104), *The Lute Player* from c. 1612–20 at the National Gallery of Art, Washington D.C. (the museum's website, consulted 1 November 2014, stated that the 'ground is a dark, grayish brown color'; however, when website was consulted again on 23 August 2015, the technical summary on *The Lute Player* was found to be much reduced and no longer included the remark about the ground), and *The Finding of Moses* from c. 1630–32, formerly at Castle Howard (Nicola Christie, 'Technical Examination of Gentileschi's *The Finding of Moses* (ex Castle Howard)', *Apollo*, 145 (June 1997), 36–37. Orazio did not always paint on brown grounds. When painting outside Italy, he often used a reddish lower ground with

- a gray upper ground as in, for example, *Rest on the Flight to Egypt* (1624–28, Birmingham Museum and Art Gallery) and *Public Happiness Triumphant Over Dangers* (1624, Paris, Musée du Louvre), both of which were probably painted in Paris; see Stéphane Loire, Elisabeth Martin, Elisabeth Ravaut, and Jean-Paul Rioux, 'Les deux tableaux d'Orazio Gentileschi conservés au musée du Louvre: étude de la technique d'origine et contribution à l'histoire des deux tableaux', *Technè*, 19 (2004), 47–56 (pp. 51–52).
15. Commentary by conservator-restorer Nicola Ann MacGregor in Linda Falcone, Jane Fortune, and others, *Artemisia Gentileschi, David and Bathsheba. The Restoration* (DVD, Florence: Art Media Studio, 2008).
 16. On the discovery of this work, see Adelina Modesti, *A Newly Discovered Late Work by Artemisia Gentileschi: Susanna and the Elders of 1652*, in *Women Artists of Early Modern Italy: Careers, Fame, and Collectors*, ed. by Sheila Barker (Turnhout: Brepols, 2016). On the technical examination of the work, see Gian Piero Cammarota, Diego Cauzzi, Pietro Moioli, Claudio Seccaroni and Anna Selleri, 'L'ultima Susanna di Artemisia Gentileschi ai raggi X', *Kermes. La rivista del restauro*, 88 (2012), 55–60 (p. 57).
 17. Claudio Falucci, 'Practices and processes, from the Odescalchi *Conversion of Saint Paul* to the *Adoration of the Shepherds*', in *Caravaggio's Painting Technique: Proceedings of the CHARISMA Workshop*, ed. by Marco Ciatti and Brunetto Giovanni Brunetti (Florence: Nardini Editore, 2012), 31–40 (p. 31).
 18. Larry Keith, 'Three Paintings by Caravaggio', *National Gallery Technical Bulletin*, 19 (1998), 37–51 (pp. 38, 42, 45).
 19. Giancarlo Sidoti, Fabio Talarico, Giuseppina Vigliano, 'Caravaggio's Painting Technique through the Study of Cross-Sections: Optical Microscopy Survey and SEM-EDS Analyses', in *Caravaggio's Painting Technique: Proceedings of the CHARISMA Workshop*, ed. by Marco Ciatti and Brunetto Giovanni Brunetti (Florence: Nardini Editore, 2012), 69–78 (pp. 70, 76).
 20. Elisabeth Martin, 'Grounds on Canvas 1600–1640 in Various European Artistic Centres', in *Preparation for Painting: The Artist's Choice and Its Consequences*, ed. by Joyce H. Townsend, Tiarna Doherty, et. al. (London: Archetype Books, 2008), 59–67 (pp. 63–64).
 21. For this painting, see also Elisabeth Martin, Alain Jarry, Michel Jeanne, Cinzia Mancuso, and Nathalie Volle, 'Les Muses de Baglione: restauration et contexte technique', *Technè*, 17 (2003), 28–36 (p. 30).
 22. As noted by Martin, analyses of the grounds of twenty-six paintings by Poussin in the Louvre were published in Alain Duval, 'Les enduits de préparation des tableaux de Nicolas Poussin', *Technè*, 1 (1994), 35–42. Duval found that in Poussin's first years in Rome (1624–40), the painter primarily used brown grounds (Duval, 'Les enduits de préparation des tableaux de Nicolas Poussin', p. 36). Brown grounds in paintings from artistic centers outside Rome cited by Martin include Ludovico Carracci's *St Hyacinth's Vision of the Virgin*, painted in Bologna in 1594; Bernardo Strozzi's *Madonna of Justice*, painted in Genoa around 1620; Carlo Bononi's *The Madonna of Loreto*, painted in Ferrara around 1615, and Domenichino's *Rinaldo Presenting a Mirror to Armida*, painted in Mantua in 1620 (Martin, 'Grounds on Canvas 1600–1640', p. 63).
 23. Karin Groen, 'Grounds in Rembrandt's Workshop and in Paintings by His Contemporaries', in *A Corpus of Rembrandt Paintings*, by Ernst van de Wetering with Karin Groen, Peter Klein, Jaap van der Veen, Marieke de Winkel (Dordrecht: Springer, 2005), 318–34 (p. 332).
 24. Karin Groen, 'Grounds in Rembrandt's Workshop and in Paintings by His Contemporaries', p. 332.
 25. Infrared reflectography was carried out with a Lion systems infrared camera equipped with an InGaAs captor, 512 × 640 focal plane array, 55 mm micro-Nikkor lens 2.8, and a 1.5–1.73 micron narrow-bandwidth filter.
 26. Larry Keith, 'Caravaggio's Painting Technique: A Brief Survey Based on Paintings in the National Gallery', in *Caravaggio's Painting Technique: Proceedings of the CHARISMA Workshop*, ed. by Marco Ciatti and Brunetto Giovanni Brunetti (Florence: Nardini Editore, 2012), 23–30 (p. 26); Falucci, 'Practices and Processes', pp. 32–35.
 27. Christiansen and Mann (eds), *Orazio and Artemisia Gentileschi*, p. 428.
 28. Christiansen and Mann (eds), *Orazio and Artemisia Gentileschi*, p. 255.
 29. Larry Keith, 'Three Paintings by Caravaggio', *National Gallery Technical Bulletin*, 19 (1998), 37–51 (pp. 38–39).
 30. The spectra were taken with an ARTAX micro-XRF instrument equipped with an Rh X-ray tube (Bruker AXS, Germany). A polycapillary lens was used to reduce the X-ray beam to a lateral resolution of 70 µm. All measurements were carried out using the following instrumental parameters: a tube voltage of 50 kV, a current of 600 µA, and 60 s measuring time; no filters were used. Elisa Longhini carried out the XRF analysis under the supervision of Steven Saverwyns.
 31. The zinc is due either to the presence of an impurity in the earth pigment or to traces of later retouching.
 32. Traces of titanium white and chrome yellow were also picked up in this zone, but these are due to trace remains of later retouching on the surface of the painting.
 33. See note 31.
 34. Alliance HPLC instrumentation (WATERS NV) with automatic injection, online vacuum degasser, temperature controlled RP-18 column and PDA 996 photodiode array detection system.
 35. Elena Phipps, *Cochineal Red: The Art History of a Color* (New York: The Metropolitan Museum of Art; New Haven and London: Yale University Press, 2010), pp. 10, 13, and fig. 16 (a map showing habitats and areas of cultivation of cochineal in the Americas from the sixteenth to the nineteenth century).
 36. Phipps, *Cochineal Red*, p. 27, and Jo Kirby, Maarten van Bommel, and André Verheken with Marika Spring, Ina Vanden Berghe, Heike Stege, and Mark Richter, *Natural Colorants for Dyeing and Lake Pigments. Practical Recipes and Their Historical Sources* (London: Archetype Publications Ltd in association with CHARISMA, 2014), p. 12.
 37. Jo Kirby, Marika Spring, and Catherine Higgitt, 'The Technology of Eighteenth- and Nineteenth-Century Red Lake Pigments', *National Gallery Technical Bulletin*, 28 (2007), 69–95 (p. 71).
 38. Jo Kirby, in reference to cochineal, notes that 'the dyestuff was probably extracted from silk shearings: examination by HPLC revealed the presence of a little ellagic acid, probably derived from galls used to weight the silk before dyeing' (Jo Kirby, Marika Spring and Catherine Higgitt, 'The Technology of Eighteenth- and Nineteenth-Century Red Lake Pigments', *National Gallery Technical Bulletin*, 28 (2007), 69–95 (p. 70)).
 39. Jill Dunkerton and Marika Spring, with contributions from Rachel Billinge, Kamilla Kalinina, Rachel Morrison, Gabriella Macaro, David Pegg, and Ashok Roy, 'Titian's Painting Technique to c. 1540', *National Gallery Technical Bulletin*, 34 (2013), 4–31 (p. 24).
 40. Raymond White, 'Van Dyck's Paint Medium', *National Gallery Technical Bulletin*, 20 (1999), 84–88 (p. 85).
 41. R. Ward Bissell, *Artemisia Gentileschi and the Authority of Art: Critical Reading and Catalogue Raisonné* (University Park: Penn State University Press, 1999), p. 52.
 42. Mary D. Garrard, *Artemisia Gentileschi Around 1622: The Shaping and Reshaping of an Artistic Identity*, Berkeley and Los Angeles: The University of California Press, 2001, pp. 25–35.
 43. Garrard, *Artemisia Gentileschi Around 1622*, pp. 25–35, attributes this version to Artemisia. Bissell, *Artemisia Gentileschi and the Authority of Art*, pp. 244–45, also considers the privately owned painting as probably a replica by Artemisia, but says that a side-by-side comparison would be necessary to be sure; Judith Mann, however, sees the privately owned version as a copy (Christiansen and Mann (eds), *Orazio and Artemisia Gentileschi*, pp. 365–67). Keith Christiansen considers the Seville version to be a copy on stylistic grounds and cites the existence of two other versions, one of lower quality (presumably he meant the one referred to by Garrard), and another unpublished; see

- Keith Christiansen, 'Becoming Artemisia: Afterthoughts on the Gentileschi Exhibition', *Metropolitan Museum Journal*, 39 (2004), 101–26 (pp. 119–20).
44. Garrard, *Artemisia Gentileschi around 1622*, pp. 28–29.
45. According to Bissell, 'there is no physical evidence for the suggestion that the transparent drapery over Judith's bodice could be a later addition' (Bissell, *Artemisia Gentileschi and the Authority of Art*, p. 219).
46. The X-radiograph of this painting is published in Christiansen, 'Becoming Artemisia', p. 108, fig. 15.
47. Bissell, *Artemisia Gentileschi and the Authority of Art*, p. 189; Christiansen, 'Becoming Artemisia', p. 110, fig. 17 and p. 119.
48. Christiansen, 'Becoming Artemisia', p. 108 and fig. 14.
49. For discussion of the various points of view on this painting, see catalogue entry no. 81 by Judith Mann in Christiansen and Mann (eds), *Orazio and Artemisia Gentileschi*, pp. 417–21.
50. Patrizia Cavazzini, 'Artemisia in Her Father's House', in *Orazio and Artemisia Gentileschi*, exh. cat., ed. by Keith Christiansen and Judith W. Mann (New York: The Metropolitan Museum of Art; New Haven and London: Yale University Press, 2001), p. 290. See Cavazzini, 'Artemisia in her Father's House', p. 295 n. 113 for a confirmation of Ann Sutherland Harris's point that full-length glass mirrors were invented later. On this issue, see also Ann Sutherland Harris, *Artemisia Gentileschi: The Literate Illiterate, or Learning from Example*, in *Dolcere delectare movere: Affetti, devozione e retorica nel linguaggio artistico del primo barocco romano*, ed. by Sible de Blaauw (Rome: De Luca, 1998), 103–20 (p. 114).
51. Patrizia Cavazzini, 'Appendix 1. Documents Relating to the Trial of Agostino Tassi', in *Orazio and Artemisia Gentileschi*, exh. cat., ed. by Keith Christiansen and Judith W. Mann (New York: The Metropolitan Museum of Art; New Haven and London: Yale University Press, 2001), pp. 432–44. On the use of live models by Orazio, see also Christiansen and Mann (eds), *Orazio and Artemisia Gentileschi*, pp. 9–12.
52. Cavazzini, 'Artemisia in her Father's House', p. 289.
53. Bissell, *Artemisia Gentileschi and the Authority of Art*, p. 22.
54. Francesco Solinas, 'Rome 1620–1627', in *Artemisia: Pouvoir gloire et passions d'une femme peintre*, exh. cat., ed. by Roberto Contini and Francesco Solinas (Paris: Gallimard, 2012), 78–93 (p. 79).
55. Christiansen and Mann (eds), *Orazio and Artemisia Gentileschi*, p. 322, cat. no. 57.
56. Garrard, *Artemisia Gentileschi: The Image of the Female Hero in Italian Baroque Art* (Princeton: Princeton University Press, 1989), p. 398.
57. On the history of glue-paste lining adhesives, and the difference between glue-paste 'compo' lining adhesive and the more viscous 'pasta' lining adhesive, see Joan Reifsnnyder, 'Glue-Paste Lining Adhesives', in *Conservation of Easel Paintings*, ed. by Joyce Hill Stoner and Rebecca Rushfield (Abingdon and New York: Routledge, 2012), 425–25 (p. 417). On nineteenth-century Italian lining techniques, see Giovanni Secco Suardo, *Il restauratore dei dipinti* (Milan: Hoepli, 1993 [First Edition: 1894]), pp. 245–86.
58. We thank Elisabeth Van Eyck for sourcing this photograph for us in the Fototeca Briganti, Siena.





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