

Portrait of a Lady
Nicolaes Maes, 1682
Oil on canvas
47³/₄ × 39³/₄ in. (121.2 × 101 cm)
Columbia Museum of Art, Columbia, South Carolina
CMA 1962.17 (K-1134)



FIG. 1. *Portrait of a Lady*, before cleaning and restoration.



FIG. 2. *Portrait of a Lady* (fig. 1), after cleaning and restoration.

Portrait of a Lady and Techniques in the Late Paintings of Nicolaes Maes

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THE KRESS COLLECTION PAINTING by Nicolaes Maes, *Portrait of a Lady* (figs. 1 and 2), signed and dated 1682, which is now in the Columbia Museum of Art in Columbia, South Carolina, is examined here in the context of other late paintings by Maes. Nicolaes Maes was a premier portrait painter in Holland in the second half of the seventeenth century. Painted during the period in which he devoted himself exclusively to portraiture, the Columbia painting is typical of Nicolaes Maes's later mature style, illustrating his facility for capturing a likeness and rendering rich drapery and background elements with technical economy. Portrait painting techniques and studio practices are discussed in some detail. And an unusual glazing technique used by Maes on numerous paintings including the Columbia *Portrait of a Lady* is discussed here for the first time.

NICOLAES MAES

Nicolaes Maes was born in Dordrecht in 1634. The artist and biographer, Arnold Houbraken (1660–1719), in the closest contemporary account of Nicolaes Maes's life, recorded in the second volume of his three-volume *De Grootte Schouburgh der Nederlantsche Konstschilders en Schilderessen* (1719)¹ that “Maes's early training in drawing was with an unknown ordinary Dordrecht master,” and that later, still as a young man, perhaps between 1646 and 1650, he traveled to Amsterdam where “from Rembrandt he learned painting.”² Exactly how long he spent with Rembrandt is unknown; however, through Maes's marriage it is

documented that he had returned to Dordrecht by 1654, where he worked as an independent painter. In 1673, he moved back to Amsterdam, to live and work until his death in 1693.³

During his early period, Maes ranked among the most innovative of Dutch genre painters, depicting interior scenes not only within the usual simple, three-walled spatial arrangements, but also in suites of rooms that were better suited to his intended narratives of the intrigues of everyday domestic life. His numerous depictions of eavesdroppers, painted between 1655 and 1657, best exemplify this compositional arrangement. This design innovation exercised a decisive influence on Delft painters such as Pieter de Hooch (1629–1683) and Johannes Vermeer (1632–1675), and had a lasting impact on seventeenth-century Dutch paintings of interiors. Rembrandt's influence is recognizable in Maes's early genre paintings in the use of isolated areas of opaque color and a rich chiaroscuro to render forms and their spatial relationships.⁴ The use of a restricted palette, rich in browns and reds, is also characteristic of these early paintings.

His early portraits, those from the 1650s, also show a degree of indebtedness to Rembrandt. However, by the 1660s Maes had moved away from Rembrandt's style and what he may have considered a more staid type of portraiture and began to develop a more "van Dyckian" style. In Houbraken we read that Maes "learned . . . painting from Rembrandt but soon gave up this way of painting, particularly when he devoted himself to portraiture and saw that young girls, especially, take more pleasure being shown in white than in brown."⁵

Houbraken also records that Maes had a good character, worked hard and was serious in developing himself as an artist; he adds that Maes visited Antwerp where he was able to see the works of Rubens, van Dyck, and other masters. During that visit he also met with artists including Jacob Jordaens (1593–1678). This visit is enlivened with a conversation in which Jordaens asks Maes, "What do you make?" and upon Maes's reply of "I am a portrait painter," Jordaens comments, "Brother, I have pity on you, for you are one of

the martyred."⁶ Even if the visit took place, it is uncertain whether Houbraken could really have known of the conversation. Rather, Houbraken seems to use the conversation to both acknowledge Maes as a portrait painter whom he admires and as an opportune way to expound on the prevailing theory of the hierarchy of pictorial genres.

Though the Antwerp trip has been considered a major reason for Maes's shift in style, the change is more likely derived from the influence of Adrian Hanneman (1601–1671) and Jan Mijtens (1614–1670) among others, who were Dutch proponents and followers of what was then becoming an international "van Dyckian" style. Both Hanneman and Mijtens worked in The Hague, not far from Dordrecht, and both worked primarily as portrait painters. Their portraits relied heavily on Anthony van Dyck (1599–1641), and Hanneman especially is credited with playing a major role in disseminating van Dyck's influence throughout Holland.⁷ During his stay in Amsterdam, Maes would also have had the opportunity to become familiar with the work of Jan Lievens (1607–1674), Bartholomeus van der Helst (1613–1670), Ferdinand Bol (1616–1680), and Govert Flink (1615–1660), who were also incorporating the Flemish style into their work.

By the time he returned to Dordrecht around 1654, Nicolaes Maes had begun to devote himself to portrait painting. It is not difficult to imagine that the younger Maes, in pursuing his career and looking to a more classicist style, would have come under the influence of other successful portraitists and begun painting in a style that has since been considered a reflection of the national spirit of the times.⁸ By the 1660s Maes devoted himself exclusively to portrait painting. These portraits depict the well-to-do, usually dressed in the formal costume of the day and set in sumptuous, often brightly colored backgrounds. They began to become standardized, depicting different sitters in similar poses, with similar details in clothing, attributes, and surroundings.

An overview of the body of Maes's early genre paintings reveals a limited number of subjects and their frequent repetition.⁹ One can imagine the

ease with which Maes would later develop as a portraitist content with repeating similar pictorial elements over and over. Such repetition would have been a necessary requirement for a prolific production. It is just this sensibility that contributed to the lower status given to portraiture in the theory of painting hierarchy alluded to by Houbraken when he wrote about Maes's visit with Jordaens. In comparison to the creative freedom a history painter had in depicting noble and learned subjects, the portrait painter's subordination of the imagination in capturing the likeness of the sitter and the constant repetition of settings is one reason for the differences in status.

Using a system described here as a fill-in method, a painter might have a few different standard-size pre-prepared supports, any number of stock poses, and a variety of standard drapery types and backgrounds that could be adapted according to the wishes and budget of the client. In a limited number of sittings, organized both for the comfort of the sitter and the demands of the painting technique (such as the need for a paint layer to dry before subsequent paint can be applied), the face and possibly the hands would be completed. Then the painting could be finished through the addition of the costume and background without the sitter's presence.¹⁰ Though his style continued to change, it appears that Maes worked in this way for the rest of his career.

By the 1670s Maes had developed a new portrait style in which very elegantly and colorfully dressed sitters were placed against architectural elements often leading to a view of a pastoral landscape. Changes in costume types typify this shift. Under the influence of English and Flemish fashions, Maes begins to dress his sitters in what was later described by Gerard de Lairesse in his *Het Groot Schilderboek* (Amsterdam, 1707) as "the Painter-like or antique manner, but by the ignorant Commonalty, the Roman Manner," which "signifies, a loose, Airy Undress, somewhat favoring the Mode, but in no wise way agreeing with the ancient Roman Habit."¹¹ Lairesse credits Lely as the originator of the "antique manner" of dress, whereas Sir William Sanderson writing fifty

years earlier more correctly credits van Dyck as the "First Painter that e'er put Ladies dresse into a careless Romance."¹² This sort of dress is seen in the Maes portraits of *Simon van Alphen* (fig. 3) and another *Portrait of a Lady*, possibly Mary Stuart (fig. 4).

In 1673 Nicolaes Maes returned to Amsterdam where his success as a portrait painter continued unabated until his death in 1693. As Houbraken further recorded:

Having settled in Amsterdam, so much work came his way that it was deemed a favor if one person was granted the opportunity to sit for his portrait before another, and so it remained until the end of his life, which is why he left a large number of portraits incomplete [at his death].¹³

In conjunction with this success, Maes utilized a variety of techniques that allowed him to rapidly achieve the desired luminosity and rich finish of his pictures. His working method may also have contributed to the number of incomplete works in his studio after he died.



FIG. 3. *Portrait of Simon van Alphen*, Nicolaes Maes, ca. 1677, oil on canvas, 28 1/8 x 22 1/2 in. (71.5 x 57 cm). Rijksmuseum, Amsterdam.



FIG. 4. *Portrait of a Lady* (possibly *Mary Stuart*), Nicolaes Maes, ca. 1677, oil on canvas, 27 × 22 1/4 in. (68.7 × 56.5 cm). Timken Museum of Art, San Diego, CA.

THE KRESS COLLECTION *PORTRAIT OF A LADY*

The Kress/Columbia picture, painted in Maes's mature style, is signed and dated "N Maes 1682." The identity of the sitter, an older woman of some means, is unknown.¹⁴ It is likely that she is a widow, recognized as such by the mourning clothes she wears, which include a widow's peak of black lace (*tipmuts* in Dutch) partially covering her hair and perhaps the single golden band on the index finger of her right hand. A white blouse and a gray scarf accent a black silk or satin dress. The absence of lace in the white blouse could indicate that she is in a later stage of mourning.¹⁵ It is also possible that, as an older woman, she is dressing in the fashion that was prevalent when she was young.

To her left, an open view of the sky indicates that she is either in front of a window or on an open balcony. Muted reds and browns dominate the background. A dark red curtain billows across the top and down the right side of the

composition. A table at her left and a chair, partially visible on her right, are also painted in red. All architectural elements are in muted browns. The subdued tone of the compositional elements and background contribute to the possibility of her being a widow.

The *Portrait of a Lady* was examined at the Columbia Museum of Art, while the majority of the other Maes paintings discussed here were examined at the Rijksmuseum, Amsterdam.

THE PAINTER'S TECHNIQUE

Support

The *Portrait of a Lady* is painted on a single piece of plain weave linen canvas now measuring 121.2 × 101 cm. Though he occasionally painted on wood supports, Maes favored canvas for his paintings, both large and small. The large format of this painting—one of the larger portraits in his oeuvre—implies an important commission. The size corresponds closely to a contemporary English standard size for three-quarter standing or sitting portraits, 127 × 101 cm.¹⁶

Comparing the sizes of approximately 300 portraits by Maes from after 1655, estimated as one-third of his total output,¹⁷ we see that only thirty-two paintings are larger. Of these, only six are significantly larger, and only two of the six portray single sitters. Another thirty paintings are only slightly smaller. This group of approximately sixty paintings is relatively close in size to the Columbia painting. Together they create a cluster of pictures with one dimension measuring near 107 cm and the other being proportional. In seventeenth-century Holland, cloth was woven on loom widths measured in units of ells and/or half ells; 107 cm approximates the seventeenth-century measuring unit for cloth 1.5 ells wide. This was the width of a standard bed sheet in Holland and one of the most common loom sizes in use in the seventeenth century.¹⁸ Using the entire width of cloth as one of the dimensions for a painting would minimize waste, and standardizing sizes could further reduce the time and material needed to prepare the canvas for painting.¹⁹

Preparation

The Columbia picture was prepared with a single ground layer. An admixture of earth colors and black and white pigments resulting in a warm buff color was used. This color is common not only in other Maes paintings, but also in the period. It is often found alone or over a first ground that would have been applied to fill and reduce the texture of the weave of the fabric support.²⁰ The tone of the ground plays an important part in the final appearance of the painting where thinly applied upper layers rely on the luminosity of the ground color. This is often the case in quickly or loosely rendered backgrounds and is true of the architectural elements in the Columbia picture. Where visible, as in shadows or where a reserved area was left unpainted, the ground may be only lightly or partially scumbled or glazed over. This slight addition of an overlaid color integrates these areas into the composition. The shadows of the neck and nose of the sitter are created with only



FIG. 5. *Portrait of a Lady* (fig. 1), detail of shadow under the sleeve of the blouse on the proper right arm created by light semi-transparent scumbling over ground.



FIG. 6. *Portrait of a Lady* (fig. 1), detail showing opaquely painted shadow under the sleeve of the blouse on the proper left arm.

light modeling and glazing with a semi-transparent dark color over the ground. The shadow of her proper right arm under the sleeve of the blouse is also only lightly covered ground color, but the same shadow on her proper left arm is opaquely painted in a warm pink (figs. 5 and 6).

Underpainting

Infrared reflectograms of other Maes paintings show what appears to be a broadly applied underpainting for the portrait.²¹ Though not read as a detailed sketch (detailed linear underdrawing in a Maes portrait has yet to be observed), the image visible in infrared reflectography (IRR) may have served as the primary rendering for the position, basic form and proportions of the composition. Some broad underpaint lines can also be seen in costumes. Maes could have made a more detailed sketch in chalk or another material, such as a thin umber paint, that is neither visible in the finished picture nor with IRR. The lack of detailed preparatory drawings for portraits by Maes suggests that he sketched his designs directly onto the prepared canvas. Although no examination with IRR was carried out on the Columbia painting, in the face of the *Portrait of a Lady*, a dark tone is slightly visible through thinner areas of the flesh paint and through open cracks giving the impression of the presence of an underpainting. Similar underpaint can be seen in the face, neck, and chest in a smaller painting

by Maes, the portrait of *Belchje Hulft* (fig. 7). An IRR image of the Hulft portrait (fig. 8) gives a clearer idea of what is partially visible to the naked eye in both paintings. A large paint loss in the same painting clearly reveals the underpaint used to indicate the oval surround of that portrait (fig. 9). Similar underpaint can also be seen in an unpainted area of the iris of Hulft's proper right eye.

PORTRAITURE

Maes's portraits are carefully rendered and give the impression of having been painted quickly, wet-in-wet, with careful blending of every brushstroke. Though many wet-in-wet passages can be found, especially in the costumes and background, it is probable that the build-up in the face is the result of a patient paint application, in which delicate hatching was used to blend together previously applied patches of color. When they were dry, or at least partially dry, Maes could repeat that process using similar colors, again hatched together, and then further integrated with final glazes and scumbles.

Portrait sittings at the time were shorter than one might imagine: a portrait could be painted in three to four sittings of one to two hours. The sittings would be spaced to allow time for paint to dry sufficiently before the next sitting.²²

Though scant, period descriptions of portrait painting do provide insight into the techniques used to achieve the final appearance in a portrait. Kirby Talley, in his thesis, *Portrait Painting in England: Studies in the Technical Literature Before 1700*,²³ has distilled and collated the notes of many early writers into a useful reference. Many of the portrait painters working in England during the seventeenth century were from the Continent, and their techniques would be those they learned at home. In general, Dutch painting techniques such as those used by Nicolaes Maes are similar to those of artists who traveled to work in England.²⁴

By correlating contemporary sources with observations of related portrait paintings, a general description of the portrait painting process



FIG. 7. *Portrait of Belchje Hulft*, Nicolaes Maes, ca. 1680, oil on canvas, 17 1/2 × 13 in. (44.5 × 33.1 cm). Rijksmuseum, Amsterdam.



FIG. 8. *Portrait of Belchje Hulft* (fig. 7), infrared reflectogram composite showing broad underdrawing of the face and chest as well as finer sketched lines for the costume.

can be pieced together. Over the broad but accurate guide of the underpainting (or underdrawing), the first application of the flesh tones was made. Often referred to as the dead coloring, this paint would be applied in broad patches of light and shadow placed adjacent to one another, in colors closely approximating the intended modeled final tones. These brushstrokes were laid next to, not over, each other just as Sir Peter Lely (1618–1680) advised a Mr. Fever, “lay on your patches of colouring one by another & not colour upon colour, & only hack them together & keep them beautiful and clear.”²⁵ Careful hatching was an important step addressed by many authors. Daniel King in his *Secrets* manuscript in a section on oil painting, states that after laying in the separate patches of flesh tones for the basic shadows and highlights, the areas would be carefully blended “by which means the colors incorporate & the faintness of the colors is taken away,”²⁶ that is, the differences between these patches of color resulting from the quick application would be reduced. This process is called sweetening and is done to blend the colors, creating an effect as if “they were all laid on at once and not at several times.”²⁷ Marshall Smith, a gentleman writer, in *The Art of Painting*,²⁸ printed in 1692 in London, warns that in hatching the colors into one another you must use “a light Hand, taking great care that you strike not the Shaddows so far, to foul the Lights, nor the Lights so as to Injure the

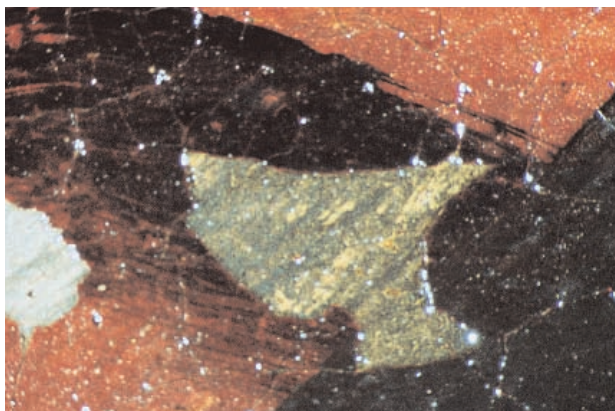


FIG. 9. *Portrait of Belchje Hulft* (fig. 7), detail of underpaint indicating the oval surround seen through a paint loss.



FIG. 10. *Self Portrait*, Casper Netscher, ca. 1670, oil on oak panel, 11 × 8 5/8 in. (28 × 22 cm). Rijksmuseum, Amsterdam. Detail showing the palette and many brushes.

Shaddows.”²⁹ Sweetening was facilitated by the use of many paint brushes, one for each different color—each one kept clean for the use of a different color. Indeed, one sees that numerous brushes are routinely represented in addition to the artist’s palette when these are depicted in self-portraits or portraits of artists (fig. 10).

Once dried, the dead coloring could be smoothed and rubbed “very thin over with a mixture of Nut-Oyle and varnish, for too much will change the Colour”³⁰ and the painting process repeated, with even greater care, to produce the desired final effects. The initial broad paint application can often be discerned by identifying bolder brushstrokes where the colors differ more distinctly from one another. The



FIG. 11. *Portrait of Belchje Hulft* (fig. 7), detail, photomicrograph of the proper right eyebrow showing the fine hatching used to blend the flesh tone into the shadow of the eyebrow.

finer brushstrokes used in the sweetening in most paintings are difficult to see but occasionally fine hatching can be found leading into and out of shadows. Over time the fine brushstrokes may be even more difficult to observe if the impasto has been softened and flattened through aggressive restoration interventions. In a photomicrograph from the *Portrait of Belchje Hulft*, it is possible to see some brushstrokes of fine hatching as well as the scattered pigments of final glazes (fig. 11).

An X-radiograph can be helpful in revealing the brushwork and deciphering patterns of paint application. Contemporary descriptions of palettes prepared for portrait painting often refer to the tempering of a primary white mixture with other colors to create the different tones needed.³¹ Willem Beurs, the author of *De Grootte Waereld in 't kleen geschildert*, published in Amsterdam in 1692, devotes a short chapter to the painting of “living persons.”³² In describing a simplified palette for this, Beurs lists thirteen color mixtures,³³ nine of which contain white—most likely lead white. The presence and relative thickness of lead white is primarily what is read in an X-radiograph.

In the X-radiograph of the face of the *Portrait of a Lady* it is possible to decipher broader, thicker brushstrokes that have been blended together by finer brushstrokes (fig. 12). The rougher appearance of the paint application in the X-radiograph is accounted for by the numerous individual

brushstrokes of paint. This differs significantly from the fine blending of the colors visible in the finished painting. In the X-radiograph, the application of lead-rich flesh color is seen as less dense in shadow areas where the ground and/or under-paint played a greater role in the modeling.

In Maes's pendant portraits of Elizabeth van der Meer and Maarten Pauw (figs. 13 and 14), the initial broad patches of flesh-color paint are visible on the surface. The colors are not as fully blended together. This is especially so at the contours of the shadows.

In Maes's paintings, finished details such as eyes, nose, and lips that may have been partially indicated as areas of reserve as a portrait progressed, were finished only shortly before the surface completely dried. As the face was finished the hair was laid in. In the X-radiograph of the face of the Columbia portrait, a slight outline of the outer form of the hair and an extension of the forehead to the right are visible. This outlining



FIG. 12. *Portrait of a Lady* (fig. 1), X-radiograph, detail of the face showing the finer brushwork found in the structure of the painting.



FIG. 13. *Portrait of Elizabeth van der Meer* (pendant to *Maarten Pauw*), Nicolaes Maes, oil on oak panel, 17³/₈ × 12¹/₄ in. (44 × 31.2 cm). Collection of Pauw van Wieldrecht, The Netherlands.



FIG. 14. *Portrait of Maarten Pauw* (pendant to *Elizabeth van der Meer*), Nicolaes Maes, oil on oak panel, 17³/₈ × 12¹/₄ in. (44 × 31.2 cm). Collection of Pauw van Wieldrecht, The Netherlands.



FIG. 15. *Portrait of a Lady* (fig. 1), detail of the widow's peak showing the reintroduction of flesh-colored paint that creates the lace pattern on the forehead.

may indicate that some fundamental drawing was done with a lead-based, flesh-colored paint. The lighter paint on the right extends, for example, under the edge of the hair and indicates the shape of the head. Over this light underpaint, the hair was painted in; this created more contrast and visibility of the strands of hair than if they were painted directly onto the darker ground or a dark underpaint. When modeling the face, a reserve, visible in the X-radiograph, was left for the point of the lace widow's peak. The point of the reserve is rounder than the point created by the subsequently applied black lace. After painting in the black lace it was necessary to recreate its transparency. To achieve this, flesh color was reintroduced over the widow's peak (fig. 15). This paint was wetter and slightly darker than the first flesh paint applications and, as can be seen in the X-radiograph, contained less of the white lead pigment.

While Maes painted the face in the Columbia picture, he darkened the background to the left and above the sitter with an arc of dense brown paint. This corrected the contour of the cheek and gave more contrast to the left side of the face against the background. This type of adjusting or outlining is not unusual and is often seen in both finished and unfinished portraits by many painters. In this portrait, similar paint may also have been used at the same stage to indicate the architectural forms and the shapes of the curtain,

table, and chair. Further analysis might reveal that this paint is directly related to the previously described dark underpaint of the figure. Darker contour lines that are clearly visible within the architecture and along the edges of the curtain are partially painted over. Some of these lines continue under the costume, indicating their role in the initial laying-in of the composition.

The costume and background were often secondary to the portrait. It was not uncommon for a busy portraitist to employ assistants or even professional drapery painters to complete compositions after the portraits were laid in. Little is known of Maes's studio, and there is no record of how it operated. Only a few possible students or assistants have been identified.³⁴

Given the number of paintings currently attributed to Maes, he could have done all the portrait work himself. It has been estimated that during his most productive years he would have had to complete only one portrait every two weeks.³⁵ The account by Houbraken of many unfinished paintings being left in his studio when Maes died seems unfounded, unless they were later finished, if not by other artists, then by one or more assistants. Though it has also been argued that the simplification and repetition of Maes's later paintings indicates the probable use of assistants, no evidence for this exists either.³⁶ On the contrary, Maes's display of skill in portraiture and his ability—in his later works—to integrate the costumes and backgrounds so well with the portrait indicates that even the strong stylization was a personal choice. The simplicity of the techniques employed seems quite intentional, making it unlikely that assistants were needed to complete his works.

With great economy Maes could create dazzling effects in both simple and very fanciful dress with little effort. The costume and background of the Columbia *Portrait of a Lady* are painted with just such skillful simplicity.

As a general practice, the face and hands were finished first, after which the costume and background would be painted in. In most cases this is seen in the overlapping of paint at the transitions.



FIG. 16. *Portrait of a Lady* (fig. 1), detail of the stylized paint application used to render the dress.

This sequence is evident in the Columbia painting where it appears that the costume was completed before the background, though some indications for the background were in place before the costume was painted. Confusion as to the order of painting can arise when transitions are subsequently carefully covered or sharpened with additional paint after two adjacent areas have been completed.

It is clear in the Columbia painting, however, that after completing the face and hands and before painting the black dress, Maes painted the sleeves and neck of the white blouse and then the scarf. To paint the scarf, somewhat dry gray paint was applied in long brushstrokes, which skipped along, leaving the paint and even the ground below slightly exposed. This gives the scarf a light transparent appearance. The highlights and final touches of the shawl, which extend over and along the transition of the black dress, were added after he completed the dress.

The painting of the dress is not literally descriptive but schematic with an abstract quality (fig. 16).³⁷ This is especially true in the area to the right, below the hand, where the folds of the cloth are difficult to interpret. This daring show of bravura must be by Maes himself. It is difficult to imagine that such a schematic design on an important commission would be acceptable to the patron if either an assistant or a professional drapery painter had worked on it.

In painting the larger areas of the dress, the gray and black must have been laid in simultaneously, in no specific order, leaving reserves for one color next to the other. In the largest expanse of gray, that of the bodice and the proper right sleeve, the black touches indicating folds and seams were applied over the gray. Elsewhere the black and gray cover more equal areas, and the two colors were laid on in alternating bands that were then blended together wet-in-wet, sometimes with the black over and into the gray and sometimes vice versa. Small areas of uncovered ground can occasionally be found between the two colors. Black lines were then used to indicate the seams, to clarify the forms of the folds, and to sharpen the outer edges of the dress. The white highlights were added last. Finally, black was also used to sharpen the final contours of the white blouse, the scarf, and the hands and wrists.

The much smaller portrait of Elizabeth van der Meer (see fig. 13), who also wears a black costume, was painted in the same general sequence. The dress is simpler in design with a plain black bodice and only minimal gray highlights to create volume. In this small scale the execution does not have the extreme abstraction found in the Columbia dress, but it too has a schematic quality.

The background of the Columbia painting is created with similar economy. Immediately behind the sitter's head, the area was evidently quickly covered, filling in the architectural elements without fully resolving the forms. Only scant shading and a few darker, drawn lines create any illusion of depth. The paint is lighter than the dark brown used to correct the contour of the face and extends over it. This brown is lighter because of the inclusion of clearly visible large particles of coarsely ground lead white. Had he used more finely ground white pigment the effect would have been different.

The sky is also schematically rendered and painted like many of Maes's skies. The colors have a dark appearance that contributes to the overall subdued tone of the background. The pigment smalt, ground from glass colored with cobalt oxide, here mixed with lamp black and lead

white, dominates the bluer areas of the sky. In the Columbia painting the smalt, which is prone to color change in an oil medium, appears to have faded.³⁸ The increased translucency of the pigment and yellowing of the oil medium give the sky a somewhat muddied appearance. However, despite the discoloration, the light tone of sky creates a balanced composition with other high-lighted background elements that surround the sitter.

The curtain, chair, and table are quickly executed with broad shadows, abstracted highlights, and monochromatic mid-tones. A minimum of detail is found in the highlights of the chair and in the folds of the cloths. What may be a book on the table under the sitter's elbow is hardly recognizable as such. The broad mid-tones of the curtain and the back of the chair are accentuated with a free application of a light brown paint containing the same discrete, large, white particles found in the architecture. In all its applications, that brown paint extends slightly over the previously rendered contours including the edges of the hair and the costume.

Over the entire curtain, the chair, and the table, Maes applied an even layer of monochromatic red glaze. What appears as almost amateur or perhaps incomplete was, however, calculated to achieve a particular finished effect. The red increases the depth of the darkest shadows and is most vivid over the highlights. It is subtler over the brown mid-tones, but there the overall effect of the red color is increased by the reflectance of light off the large white pigment particles and back through the transparent red glaze.

THE UNUSUAL TECHNIQUE OF OVERALL GLAZING WITH RED

This technique would be an anomaly if found only on this picture; or it could be a quick trick by someone other than the artist to finish a painting or to cover damage from a harsh cleaning. But this technique of complete glazing has been observed on other Maes paintings where it creates an even more dramatic effect.³⁹ Maes uses this technique for its economy, quickly bringing bril-

liant red coloring over previously modeled forms. In rendering such colored fabrics he not only follows traditional techniques but takes glazing a step further.

Could this be a unique innovation by Nicolaes Maes? In the Columbia portrait, as in other Maes paintings, all the modeling for this particular red glazing technique is done in the underpainting. The red glaze is freely applied over the modeling without any consideration for the forms below. It is used only to give the final overall color. The form of the drapery relies entirely on the underpaint.

Generally speaking, in easel painting, color glazes are used either to delineate design motifs (as in brocades), to locally add color or shadow to underpainted modeling, or to actually model final forms. When intensifying the color or shadow of previously applied undermodeling, the glaze is usually applied in a painterly manner following the underlying modeling, denser (usually thicker) over shadows, lighter (usually thinner) over mid-tones and highlights. The same is generally true when using a translucent color in conjunction with other colors to initially build a form or when the glaze alone is used to model a form. Maes also used translucent paints in these other ways. For example, the coat in the portrait of Maarten Pauw (see fig. 14) is modeled only with red lake paint mixtures. In that painting, subtle mixtures of a red lake, black, and other light-colored pigments are applied directly over the ground, to model the sitter's coat. No underpainting or undermodeling was used. In other instances Maes would complete a drapery and then with a similar transparent color, glaze over the highlights only.

Maes's application of the red glaze over a fully developed and modeled drapery is not unusual. Overall applications of glazes coloring undermodeled drapery are often noted in sixteenth-century Venetian paintings⁴⁰ as well as in the works of painters directly influenced by them. However, these artists invariably used the glaze to accentuate the form with thicker and thinner applications following shadows and highlights.

Maes is unusual in that he boldly applied the red glaze *uniformly* over the *entire* underpainting with *no variation in either color or density* of the glaze in relation to the shadows or highlights below. The initially modeled drapery thus becomes a complete underpainting. Future research may reveal that Maes also used the technique for colors other than red and that other artists also used similar techniques.⁴¹

EXAMPLES OF GLAZING FROM EARLY LITERATURE

The transparent red pigments used during this period were made from various natural dyestuffs, artificially extracted and precipitated onto a substrate.⁴² Analysis of samples of the transparent red from Maes's paintings, including the Columbia *Portrait of a Lady* indicate that his red contains carminic acid derived from the cochineal insect.⁴³ After 1600, cochineal and brazilwood imported from the New World became the predominant source materials for red dyes and the manufacture of red lake pigments used in western Europe. Cochineal, however, was the red colorant of choice for painters, as brazilwood was unstable and faded rapidly when used in painting. Numerous early literary references to glazing correspond to what is found in the glazing technique used by Maes.⁴⁴

In 1649, for example, Francisco Pacheco refers to painting various red draperies and comments on the quality of cochineal red. He gives instructions for different *bosquexo* (a more or less finished underpainting) that can be glazed or left unglazed. For a red glaze in oil, he suggests the use of carmine from Florence or maybe Honduras, both of which he states are better than that from the Indies. One suggestion for painting a crimson cloth reads, "model with vermilion and carmine, adding lead white or a little black as desired . . . when dry, glaze once or twice with good Florentine carmine." Further he discusses the importance of using good quality colors and "to wash the painting before glazing so the glaze will spread over it."⁴⁵

A much earlier reference to glazing from Gian Paolo Lomazzo's *Scritti sulle arti*, 1584 (translated

in 1598 as *A Tracte Containing the Artes of Curious Painting, Carvinge & Buildinge*), gives a description close to what we observe in Maes though it refers only to the painting of gems and other transparent bodies. Lomazzo states that the form of the object is first underpainted in dead colors and “afterwards laxeered over with simple, pure and clear lake, which doth most artificially represent those lights and shadows, which in thruth are not there . . .”⁴⁶

Another early reference, found in the *Arts of Poetry, and Painting and Symetry, with Principles of Perspective* (1615) by Filipe Nunes, also gives general glazing instructions in a section on “How to Glaze.” Referring first to using green verdigris,⁴⁷ he instructs:

first paint evenly in white and “preto” (a dark brown or black tone) that which you wish to glaze, and see that you make the highlights quite white and the darks quite dark. After it is good and dry . . . you can glaze it this way: Wrap a bit of cotton with a bit of very soft linen cloth, making a kind of brush . . . As you spread the verdigris you will see the lights appear as greens and the darks appear as dark greens.

Though he is describing verdigris, he follows with, “The same can be done with lacra.”⁴⁸

In the well-known De Mayerne tract, *Pictoria Sculptoria & quae subalternarum artium* (1620), a recognized compilation of techniques from various sources, glazing technique is noted in a section on the working of various colors. This includes a red “Laque” that can be glazed in one of two manners with a “clean brush” or, as described by Nunes, “. . . with a shredded clothe with cotton inside . . .” Over a dead color rendering done with a mixture of lac, white, and brown, “. . . make a glaze of beautiful lac . . . and after on the glaze you can further lighten and darken.”⁴⁹

The Harley treatise (1664) also refers to using a cloth to glaze overall, “when it [the undermodeling] is dry glaze it over with faire lake, that is, strike it thereon allover & rub it all over with a little stuff with cotton, this is make ye lake even.”⁵⁰

Karel van Mander in 1618 gave a direct descrip-

tion for glazing drapery, though without going into detail as to color build-up: “to paint beautiful drapery, place your first layers in a suitable color and only then glaze, and if it works, you can bring about a glowing transparency of velvet and beautiful satins.”⁵¹

Many of the authors seem to borrow from previous ones. The material in many treatises on painting methods and materials was often copied from one to the next with slight variations, additions, and deletions. Marshall Smith, in the previously mentioned *Art of Painting*, was aware of this as a potential problem when he wrote in his preface:

I Expect a full cry of Critticks, a Plagiary! A Plagiary! but first hear my Confession. I have taken several things from Lomazzo, Vincent, Teftling and others . . . I have taken all that is Necessary, Corrected divers Errours, and added many things, not (to my Knowledge) Publish'd before.

In writing on glazing he repeats and elaborates on his predecessors. Detailing underpaint colors he writes:

for Scarlet, your drapery must be in the heights, Vermillion, and brought down first with Indian Red, then with Bone-Black: when Finish'd, Glaze it twice or thrice thin, according to the Body of your Lake . . . always remembering, that you Glaze not the Heightenings where there is any white, by reason it will render it Purpleish and take away the Beauty.⁵²

The warning regarding purple, though important for producing a good red, was also exploited by painters who wanted to produce purple drapery.

Reglazing or repainting to intensify the color over a glazed area is often mentioned. This makes it more difficult to recognize an overall glaze application. This could be especially true when shadows are added as mentioned by Jose Garcia Hidalgo in 1693, “if a carmesi is desired glaze it over once or twice with good fine carmine and reinforce the darkest shadows with lamp-black . . .”⁵³ In fact, Maes does use this technique of reinforcement of a shadow over the initial



FIG. 17. *Portrait of Simon van Alphen* (fig. 3), UV photograph showing the fluorescence of the red glazed mantle; note the black underpaint at the edges of the mantle, reinforcement to a shadow below the hand, and the painterly application of a brown glaze over the background, notably where brushed out onto the sky.



FIG. 18. *Portrait of Belchje Hulft* (fig. 7), UV photograph showing the fluorescence of the red glazed mantle; its imprecise application can be noted along the edges.

overall glaze application.

COMPARATIVE GLAZING IN PAINTINGS BY NICOLAES MAES

Clearer examples of how Maes's technique accords with these descriptions can be found in two unrelated portraits, those of Simon van Alphen (see fig. 3) and Belchje Hulft (see fig. 7). Red is the dominant color in the costumes in both of these portraits. The glaze application can clearly be seen where distinct brushstrokes of the red glaze are visible in normal light and by the overall appearance of the glaze in ultraviolet (uv) fluorescence (figs. 17 and 18).

Under uv light the outline of the glaze covering Simon van Alphen's mantle does not exactly follow the outline of the underpainted garment. The darker color at the edge of the glaze is the underpaint without the telltale fluorescence of the glaze over it. The darker diagonal strip in the middle right is a reinforcement of the underlying shadow added, as noted by Hidalgo, over the red glazing. In a detail from the mantle (fig. 19), the pattern of the brushstroke of the red is clearly visible crossing over the undermodeling and perpendicular to it. Cross-sections of paint samples from the Alphen portrait show the paint build-up and the location of evenly applied red glaze (figs. 20A–B and 21A–B). Here the red glaze is clearly visible as a distinct uniform layer. It can also be seen that Maes often used the same translucent red pigment either alone or mixed with other colors, predominantly vermilion and red earth pigments, to build the undermodeling of the drapery. Both the high concentration of medium and nature of the pigment used cause this glaze to be strikingly visible in uv light. However, the green fluorescence seen in the painting in uv light is similar to an oxidized natural resin or oil varnish and is, therefore, easily masked by the thinnest oxidized varnish layer. Once this technique was identified in a painting being restored (and from which the old oxidized varnish layers had been removed), it was not difficult to recognize this technique in many of Maes's paintings.

In the *Portrait of Belchje Hulft* (see fig. 7), the red



FIG. 19. *Portrait of Simon van Alphen* (fig. 3), detail of the free brushstroke of red glaze crossing perpendicular over the folds of the underpainted mantle.

mantle crossing her bodice is also fully modeled in the underpaint and then glazed overall. This and the area of red to the right in the background both have the characteristic UV fluorescence of the red lake. However, in the red in the background, which is meant to be in shadow, there is no obvious undermodeling. For a more subdued effect the red was applied directly over a thin underpaint, uniformly, with little or no painterly effect, as it was in the background of the Columbia painting. In normal light the background red is not as brilliant as the foreground red. The brilliance of Belchje Hulft's mantle, on the other hand, is the result of the high key of the fully modeled underpaint colors. The differences in the paint layers creating these effects can be seen in paint cross-sections taken from both the fore-

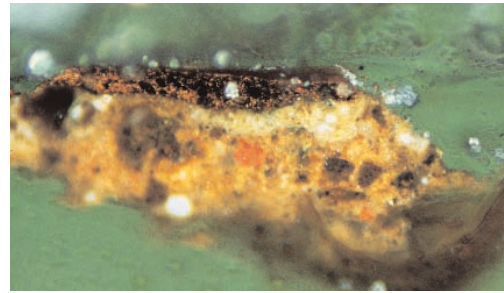


FIG. 20A. *Portrait of Simon van Alphen* (fig. 3), cross-section (200x) from a middle tone area in the red mantle.

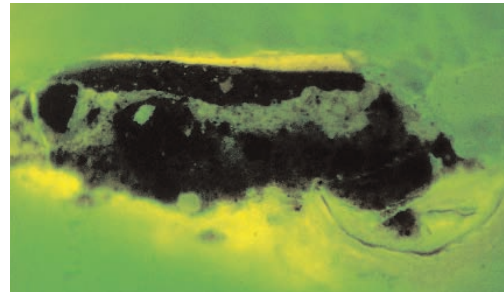


FIG. 20B. *Portrait of Simon van Alphen* (fig. 3), cross-section (200x) in UV light from a middle tone area in the red mantle.

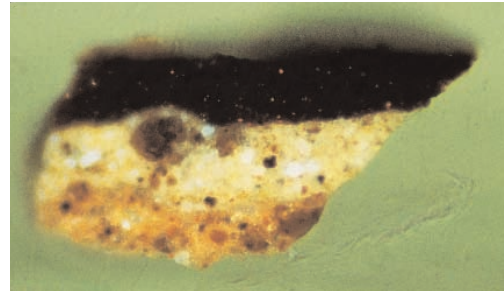


FIG. 21A. *Portrait of Simon van Alphen* (fig. 3), cross-section (200x) from the reinforced shadow in the red mantle.

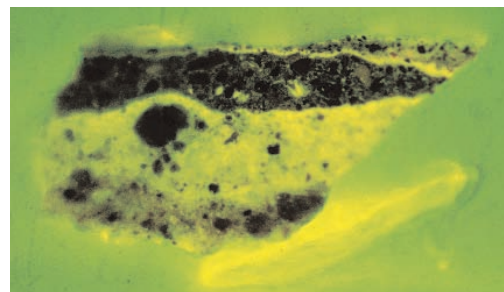


FIG. 21B. *Portrait of Simon van Alphen* (fig. 3), cross-section (200x) in UV light from the reinforced shadow in the red mantle; red glaze is visible between layers, under the black.



FIG. 22A. *Portrait of Belchje Hulft* (fig. 7), cross-section (200×) from a highlight of the red mantle.

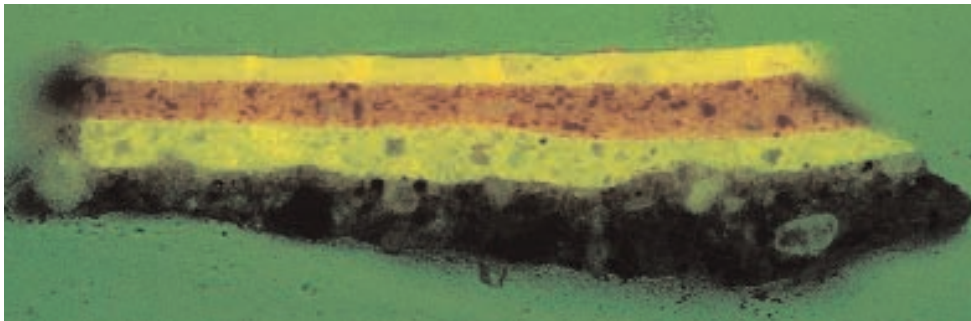


FIG. 22B. *Portrait of Belchje Hulft* (fig. 7), cross-section (200×) in UV light from a highlight of the red mantle.

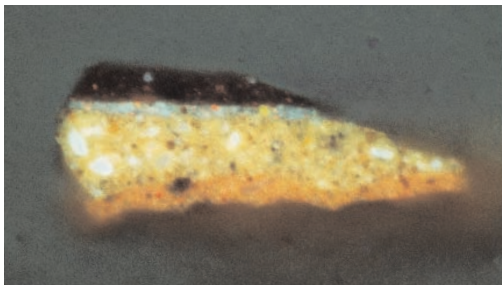


FIG. 23A. *Portrait of Belchje Hulft* (fig. 7), cross-section (200×) of the background with red glaze directly over only a thin paint layer and the ground.

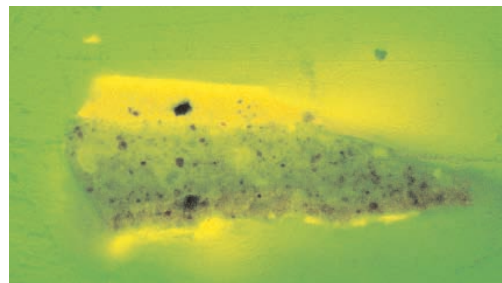


FIG. 23B. *Portrait of Belchje Hulft* (fig. 7), cross-section (200×) in UV light of the background with red glaze directly over a thin paint layer and the ground.

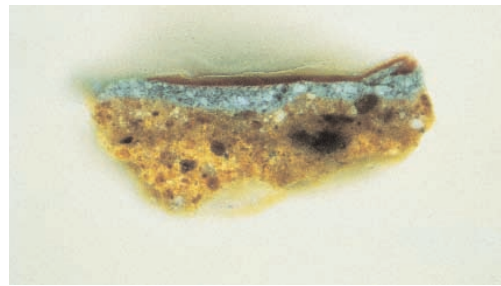


FIG. 24A. *Portrait of a Lady* (fig. 1), cross-section (200×) of the red curtain taken from the upper tacking edge of the painting.

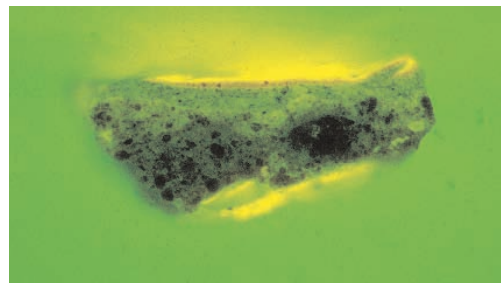


FIG. 24B. *Portrait of a Lady* (fig. 1), cross-section (200×) in UV light of the red curtain taken from the upper tacking edge of the painting.

ground and background areas of the red mantle of the Hulft portrait (figs. 22A–B and 23A–B). Further, the build-up of the red background paint in the Hulft painting and the red in a sample from the background of the Columbia picture (figs. 24A–B) are similar. Marshall Smith, whose 1692 treatise has already been cited, noted the obvious in a section on glazing in his book, in that “the same Ground by the diversity of Glazing Colours, produceth divers Colours in Drapery; likewise the Glazing Colours by diversity of Grounds.”⁵⁴

An apt illustration of the simplicity and economy of this glazing technique is found in a pair of pendant portraits by Maes, the portraits of Petronella Dunois and Pieter Groenendijk (figs. 25 and 26). The drapery covering both figures was first fully modeled in orange colors. This modeling in the portrait of Dunois was left to represent an orange drapery, whereas

the orange-colored drapery in the portrait of Groenendijk became an underpaint, glazed over with a layer of undifferentiated red (fig. 27). This resulted in an entirely different final finish of the two costumes. There is no doubt that both paintings are finished. Cross-sections of paint from each costume reveal the similarity of the two underpaints and the respective absence and presence of the red glaze layer (figs. 28 and 29).

These examples illustrate how the brilliant red glaze was often used for costumes, while in the Columbia painting it is used only in the background. In the *Portrait of a Lady* in the Timken Museum of Art, San Diego, a billowing background cloth has been glazed brilliant red with the undifferentiated technique. The sitter’s red shawl in the same painting differs from the curtain in that Maes modeled the shawl more traditionally, first with different mixtures of red lake and then by only selective glazing. The high key



FIG. 25. *Portrait of Petronella Dunois*, Nicolaes Maes, ca. 1680, oil on canvas, 27 1/4 × 22 3/4 in. (69.2 × 57.8 cm). Rijksmuseum, Amsterdam. The final orange mantle is similar to the underpaint of the red mantle her husband, Pieter Groenendijk, wears in the pendant painting.



FIG. 26. *Portrait of Pieter Groenendijk*, Nicolaes Maes, ca. 1680, oil on canvas, 27 1/4 × 22 3/4 in. (69.2 × 57.8 cm). Rijksmuseum, Amsterdam. The red glaze of his mantle covers an undermodeling similar to the final paint in his wife’s portrait.

of the red in the background drapery is similar to that in the previous uniformly glazed costume examples, again contrasting with the subdued tone seen in the Columbia painting. As in all the examples, the final color differences depend on the color of the underpaint rather than on the glaze alone. These differences illustrate that Maes was well aware of his options. Though there may be slight fading or discoloration in the red in any of the paintings,⁵⁵ it should be assumed that the more subtle color in the Columbia painting, as in the background of the portrait of Belchje Hulft, was intentional. As previously mentioned, the large discrete particles of white lead included in the brown paint used in the mid-tones of the Columbia painting not only lighten the brown color but also allow the red glaze to be more visible than if it were applied over a finely pig-

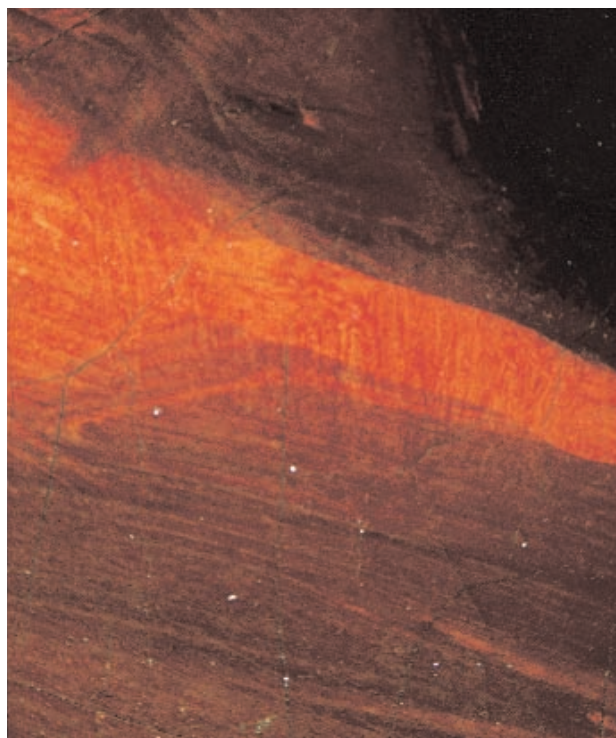


FIG. 27. *Portrait of Pieter Groenendijk* (fig. 26), detail of the free brushstrokes of the red glaze, applied without direct correspondence to the forms in the underpainted mantle.

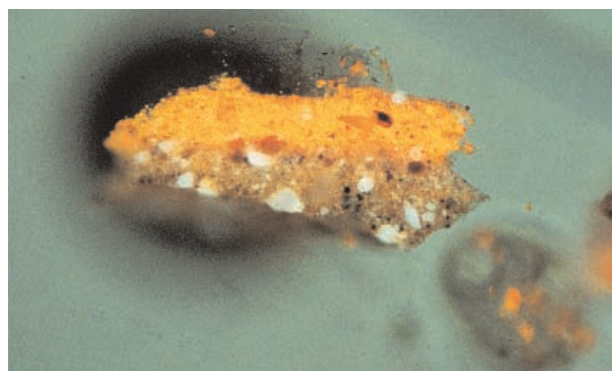


FIG. 28. *Portrait of Petronella Dunois* (fig. 25), cross-section (200x) from the orange mantle; note the absence of the red glaze.

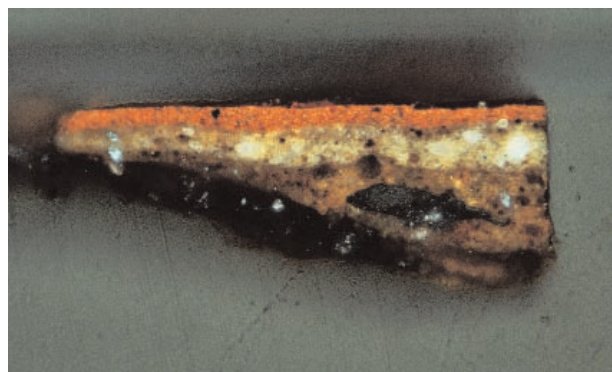


FIG. 29. *Portrait of Pieter Groenendijk* (fig. 26), cross-section (200x) from the mid-tone of the red mantle; the red glaze is applied over an underpaint of orange similar to the final layer of the mantle in the pendant portrait of Petronella Dunois.

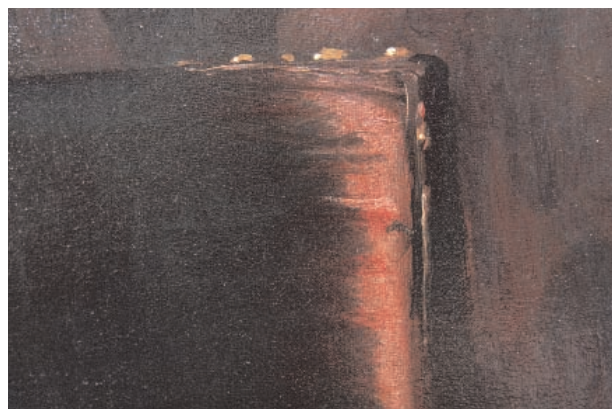


FIG. 30. *Portrait of a Lady* (fig. 1), detail of the red glaze over the chair and the curtain, with added strokes of red glaze emphasizing the highlights of the chair back.

mented uniform brown color. This was calculated to create the right balance between the reds of the mid-tones and those of the shadows and highlights. To achieve a darker effect in the shadow of the table covering, Maes used a brown underpaint without the large white pigment particles found elsewhere. As a final touch intended to further increase the contrasts, Maes accentuated the red highlights of the chair back by adding quick dashes of extra red color (fig. 30).

Nicolaes Maes was a very accomplished and adept portraitist. His technique was based on a skillful economy of paint application and on the use of a limited palette. The success of the Columbia painting is the result of the careful rendering of the portrait, which captures the powerful presence of the sitter without over-working, placed in a subdued yet colored background that perfectly frames the sitter. Arnold Houbraken recorded that:

He [Maes] had an adroit and flattering brush which served him very well in painting portraits, to which he devoted himself exclusively and [to him a very great share had fallen], I do not know if there was any painter before or after him who was so successful at capturing a likeness.⁵⁶

As much as Maes's prosperity was based on painting skill and his ability to please his clients, his economic success was also undoubtedly linked to the ease and speed of his execution. In his later works he rendered the costumes and backgrounds with such economy that upon close analysis the form of a drapery or a background design can appear illegible or lost. Nonetheless, in normal viewing, the rich appearance of the silks and satins seem to shimmer successfully as a lasting expression of the intended effect. The red glazing technique described here, found in many Maes paintings, has a special place in his oeuvre, enabling him to achieve this goal. If a painter's skill can be measured in his ability to achieve a desired effect with the most economy, Maes was an indisputable master.



FIG. 31. *Portrait of Nicolaes Maes*, Jacobus Houbraken, mixed engraving and etching, 5³/₄ × 4 in. (14.5 × 10 cm).

ACKNOWLEDGEMENTS

My sincere thanks go to the many people, especially those colleagues at the Rijksmuseum, who gave input into the discussions regarding the glazing technique of Nicolaes Maes. For their encouragement, my gratitude also goes to the late Dr. Hubert von Sonnenburg, as well as to Andrea Rothe, Dorothy Mahon and Dianne Dwyer Modestini, all of whom recognized the value of publishing a description of this technique; to Eneida Parreira and Gwen Tauber for their patient readings of the text.

Laurent Sozzani graduated from the Wintertbur Museum—University of Delaware Program in Art Conservation in 1984. From 1984 to 1986 he worked with Perry Huston and Associates in Fort Worth, Texas, and from 1986 to 1989 he was a Fellow in the Paintings Conservation Department of the Metropolitan Museum of Art. He has been a Senior Paintings Restorer at the Rijksmuseum in Amsterdam since 1990.

Christopher McGlinchey has worked as a conservation scientist at the Museum of Modern Art since 1999 and as an Adjunct Professor of Conservation Science for New York University's conservation program since 1985. He majored in Chemistry and minored in Art History at Boston University and has a Masters in Polymer Science and Engineering from Polytechnic University of Brooklyn. His work at MoMA has focused on constructing a scientific research lab capable of assisting with the technical examination of contemporary art and the development of new conservation techniques specific to the preservation of modern art.

NOTES

1. Arnold Houbraken, *De Grootte Schouburgh der Nederlantsche Konstschilders en Schilderessen*, 3 vols., 1718–21; Vol. II, 1719, pp. 273–7.
2. Houbraken 1719 (cited in note 1), Vol. II, pp. 273–4.
3. W. W. Robinson, *The Early Works of Nicolaes Maes, 1653 to 1661*. Thesis presented to the Department of Fine Arts, Harvard University, Cambridge, Massachusetts, May 1996, UMI Dissertation Services, pp. 4–5.
4. *Ibid.*, for a discussion of this topic, pp. 203–4.
5. Houbraken 1719 (cited in note 1), Vol. II, pp. 273–4. Translation from Robinson 1996 (cited in note 3), p. 47.
6. Houbraken 1719 (cited in note 1), Vol. II, pp. 275–6.
7. Mijtens and Hanneman were undoubtedly closely associated after circa 1640. Adrian Hanneman, the older of the two, spent approximately twelve years in London (1626–38). Van Dyck settled in London in 1632, and Hanneman may have worked as an assistant in his studio. Hanneman returned to The Hague in 1638 and joined the painters' guild there in 1640. Jan Mijtens lived all his life in The Hague and joined the same guild one year earlier. Jan Mijtens may have trained with his uncle Daniel Mijtens after Daniel's return from London to The Hague around 1634. As early as 1618, Daniel was in London where he was a court painter, first to James I and later to Charles I, only to be overshadowed by van Dyck's popularity in London after 1632, when Daniel returned to Holland. In 1656 when the Hague painters and sculptors disassociated themselves from the guild and set up a new artists' organization, *Pictura*, both Hanneman and Jan Mijtens were active as founders. Hanneman became *Pictura's* first dean, serving from 1656 to 1659 and again from 1663 to 1666. Mijtens was a governor from 1667 to 1668 and then dean from 1669 until 1670, the year of his death.
8. Differing opinions as to the influences on Maes are put forward in the writings of Thoré and Hofstede de Groot. Wilhelm Bürger writing in 1860 under the name Et.-Théo.-Jos. Thoré in *Musées de la Hollande II . . .* (p. 26) recalling Houbraken's account of Maes's Antwerp visit, concluded that it had been a major catalyst for his change in style. This view was countered by Cornelis Hofstede de Groot in *A Catalogue Raisonné of the Works of the Most Eminent Dutch Painters of the Seventeenth Century*, 6 (London, MacMillan & Co. Ltd., 1916, p. 474). Hofstede de Groot wrote that the sources of Maes's mature style, "are to be found in the pictures of Hanneman, Flinck, Van der Helst, Eekhout and Lievens. The later portraits of Nicolaes Maes brought no new Flemish element into the evolution of Dutch painting; the artist developed in the spirit of the times and of the national Dutch school." Both from Robinson 1996 (cited in note 3). See Robinson 1996 for discussion on the subject (pp. 41–95).
9. L. Krempel, *Studien zu den Daterierten Gemälden der Nicolaes Maes (1634–1693)*, Phil. Diss., Bonn, Rheinisch Friedrich-Wilhelm Universität (Peter Mountain, Michael Imhof Verlag, 2000); and Werner Sumowski, *Gemälde der Rembrandt-Schüler*, 6 vols. (Landau/Pfalz, Edition PVA, Pfälzische Verlagsanstalt Gmbh 1983), both for a good pictorial overview. Also Robinson 1996 (cited in note 3), for further discussion.
10. M. K. Talley, *Portrait Painting in England: Studies in the Technical Literature Before 1700* (London, Paul Mellon Centre for Studies in British Art, 1981), provides an overview of seventeenth-century English portrait painting practice. "Fill-in technique" is meant to denote studio procedures whereby paintings were finished in the absence of the sitter using such practices as: Anthony van Dyck's use of standard drawings to complete the hands of sitters (Jo Kirby, "The painter's trade in the seventeenth century: theory and practice," *National Gallery Technical Bulletin*, Vol. 20 (1999), p. 29); Sir Peter Lely's use of numerous stock poses, numbered so that a client could easily choose the most suitable one. Lely was not alone in using assistants to paint draperies and backgrounds, doing only the portrait himself. An inventory of Lely's studio made after his death included forty-five different pieces of drapery and numerous unfinished poses including fourteen half-lengths and forty-two without heads (Talley 1981, pp. 335 and 367–70). At the time of Sir Godfrey Kneller's death approximately 500 unfinished paintings were left in his studio with instructions in his will for an assistant to finish them (Talley 1981, p. 356). Though it can be argued that Maes probably did not have a large production studio with many assistants, his repetitive style does imply the use of similar procedures and devices.
11. Gerard de Lairese, *The Art of Painting, in All its Branches* from translation by J.F. Fritsch, London, 1738, pp. 345 and 347; taken from Talley 1981 (cited in note 10), pp. 369–70.
12. Sir William Sanderson, *Graphice, or, The use of the "Pen" and "Pensill" Or, The Most Excellent Art of Painting*. London: Robert Crofts, 1658, p. 39; taken from Talley 1981 (cited in note 10), p. 234.

13. Houbraken 1719 (cited in note 1), Vol. II, pp. 273–4; translation from Robinson 1996 (cited in note 3), p. 13.
14. A provenance search was carried out by Maria L. Gilbert, Director, Provenance Index, the Getty Art History Information Program, for the Columbia Museum of Art. From the file: “The provenance of the picture has been traced back to 1835/1844 as having come from the collection of Joseph Strutt, Esquire of Derby, then through family inheritance to public auction . . . , and through various private owners to Samuel H. Kress in 1938.”
15. Phyllis Cunnington and Catherine Lucas, *Costume for Births, Marriages & Deaths*. London: Adam and Charles Black, 1972, pp. 261–9.
16. This comes from an English standard size of 50 × 40 in. called a half-length or three-quarters. Talley 1981 (cited in note 10), p. 250.
17. This data compiled from Krempel 2000 (cited in note 9); Krempel estimates the total oeuvre of Maes would include approximately 900 portraits.
18. E. van de Wetering, *Rembrandt: The Painter at Work*. Amsterdam: Amsterdam University Press, 1997, p. 123.
19. Width measurements could be $\frac{2}{4}$, $\frac{3}{4}$, $\frac{6}{4}$, etc. referring to $\frac{1}{2}$ ell, 1 ell, 1.5 ell, etc. In the seventeenth century every city had its own units of measure. Both Amsterdam and Dordrecht used ell measures equal to 68.8 cm and 68.5 cm respectively. Amsterdam also used the Brabrants ell of 69.4 cm and the Brugge ell of 70 cm for cloth measures. In addition, cloth woven in Ghent, which was regularly imported into Holland, could be measured in the Ghent ell of 76.5 cm. Therefore, cloth considered to be 1.5 ell, could measure between 103 and 114 cm wide depending on its origin. These are not exact measures, only minimum measures. By using the entire width (or close to it) of a 1.5 ell cloth for one of the dimensions, a variety of painting sizes was produced creating the clusters. Similar other clusters of Maes paintings correspond to cloth of either $\frac{1}{2}$ ell (+/- 35 cm) or 1 ell (+/- 70 cm) used either in its full width or in half-widths. Though a range of sizes is seen within the clusters, they appear to represent Maes’s standard or preferred sizes. Van de Wetering (1997 (cited in note 18), p. 125), also noted a similar size cluster related to 1.5 ell when he grouped Rembrandt’s paintings. All the above ell size conversions are from J.M. Verhoeff, *De oude Nederlandse maten en gewichten* (Amsterdam: P. J. Meertens-Instituut, 1983). All four tacking edges of the Columbia painting have been cut away. However, there is little reason to believe that the size of the painting has been greatly altered. Cusping that occurs as a deformation of the lines of the canvas weave as it was originally pulled and tied or tacked to a stretching frame can give clues to the original size of a painting. The pattern of the cusping is locked into the weave by the dried ground and/or paint and is best read in an overall X-radiograph of the painting. An overall X-radiograph of the Columbia portrait was not available; nonetheless, the cusping from the stretching is visible to the naked eye on both sides, at the bottom edge, and slightly at the top edge. The absence of strong cusping at the top edge is in itself not reason enough to postulate that the painting is trimmed, as this sort of minimal cusping has been observed in other Maes paintings where the tacking edges are intact. The present canvas may have been cut at that edge from a larger piece of pre-primed canvas, or the original stretching to this size may have begun evenly with the top edge; either process could result in little cusping. The dimensions indicate that the warp direction of the fabric is probably vertical. See van de Wetering 1997 and van de Wetering, “The canvas support” in J. Bruyn, et. al., *Corpus of Rembrandt* (The Hague: Martinus Nijhoff, 1986), Vol. II, pp. 15–43, for further discussion on seventeenth-century canvas sizes and stretching procedures.
20. In the latter half of the seventeenth century in Holland, the double ground is often associated with commercially prepared canvases. These were supplied by a specialist in priming, a *premuerder*. The commercially prepared canvas would sometimes be grounded or toned again by the artist with the color he wanted as an underlayer. That this large canvas has only a single ground layer indicates the possibility that it may have been prepared only in the studio of the artist.
21. Similar IRR images have been seen in many Maes paintings. An underpaint or underdrawing layer in IRR reflectography usually indicates the presence of carbon in an underpaint layer. This poses a question as an underpaint layer has yet to be clearly identified in the analysis of a cross-section of a paint sample from the portrait in a Maes painting.
22. Van Dyck is said to have had occasional sittings lasting the whole day; whether this is true is not known (Kirby 1999 (cited in note 10), p. 15). Kneller, whose productivity was very high, could have up to fourteen different clients sit in one day for short periods; then he required between ten and twelve sittings to complete each portrait (Talley 1981 (cited in note 10), p. 350). Lely would have three to four sittings of one to three hours (Talley 1981, p. 330). The daybooks of the artist Mary Beales indicate a similar number of sittings each of the same length as Lely’s. This was probably the norm for many artists (Talley 1981, pp. 293–6).
23. Talley 1981 and also Kirby 1999 (both cited in note 10).
24. The English school of the seventeenth century was dominated by continental artists, the most famous among them being Anthony van Dyck from Antwerp. Like van Dyck, Sir Peter Lely and Sir Godfrey Kneller both learned painting in Holland. They would have needed only to adapt stylistically to English tastes. See Talley 1981 and Kirby 1999 (both cited in note 10).
25. William Gandy, *Notes on Painting, 1673–1699. Transcribed in the Memorandum Book of Ostias Humphrey, 1777–1795*, B.M. MS. Additional 22, 950, f. 24v; taken from Kirby 1999 (cited in note 10), p. 335.
26. David King, *Secrets in the Noble Arte of Miniature or Limning, ca 1653–1657*, MS. Add 12, 461, f. 47r.; taken from Talley 1981 (cited in note 10), p. 210.
27. From Anonymous, *The Excellency of the Pen and Pencil*, London, 1668, p. 102; taken from Talley 1981 (cited in note 10), p. 258.
28. Marshall Smith, *The Art Of Painting According to the Theory and Practice of the Best “Italian, French and Germane” Masters*, London, 1692.
29. *Ibid.*, p. 80.
30. *Ibid.*, pp. 80–81.
31. Talley 1981 (cited in note 10), for examples and a summary, p. 399.

32. Willem Beurs, *De Groote Waereld in 't kleen geschildert, of Schilderagtig Tafereel van s' Weerlds Schilderyen, kortelyk vervat in Ses Boeken. Verlarende de Hoof verwen, haar verscheide mengelingen in Oly, en der zelve gebruik*, Amsterdam, 1692. Sevende Hoofdeel, p. 184, *Van 't Kolorijt van een Leevendig Mensche*; Agtste Hoofdeel, p. 187, *Van 't kolorijt van een Dood Mensche*. The previous chapters deal with aspects of still-life painting and the painting of insects and animals of all kinds, landscapes and meats—raw, cooked, unsalted and salted.
33. *Ibid.*, p. 186. This is actually a very minimal palette. Talley (1981 (cited in note 10), p. 389), mentions a palette of fifteen colors that then gives twenty-seven tints and another of forty colors.
34. Krempel extrapolates from Houbraken the following possible Maes students: Jan de Haen, Jacob Moelart, Johannes Vollevens, Justus de Gelder and Margaretha van Godewijck (who may have also painted two or three garden backgrounds for Maes) (Krempel 2000 (cited in note 9), pp. 39–41).
35. Krempel estimates that during his most productive period (1675–78) Maes would have completed on average thirty-two paintings a year, and in 1675, his most productive year, a minimum of fifty-five (Krempel 2000 (cited in note 9), pp. 40–41).
36. Alan Chong and M.E. Wiesman, “De figuurschilderkunst in Dordrecht, 1620–1719” in the exhibition catalogue, *De Zichtbaere Werelt* (Dordrechts Museum, 1992, p. 28), argue that the stylization of Maes’s paintings after 1680 indicates the regular use of assistants. This argument is countered by Krempel, who though he assumes that Maes would have had assistants to prepare his palettes and do other non-painting tasks, he did not have a large production studio or school (Krempel 2000 (cited in note 9), p. 40).
37. The Kress painting *Portrait of a Lady* was cleaned and restored by Dianne Dwyer Modestini in 1997–98 at the Conservation Center of the Institute of Fine Arts, New York University. A condition report written at that time notes: “The black silk of the dress is painted in an almost abstract manner, using only middle tone and shadow, so that the folds of the drapery are flat and two dimensional.” From the Columbia Museum of Art files, undated.
38. In many paintings, Maes applied other color glazes, often less visible in uv light, either locally or in a similar overall, undifferentiated method. Some of these, altered by aging, may have also contributed to the present darkened appearance of the skies and backgrounds of many of his later paintings. Less pigmented than the red glaze, these other colored glazes are easily confused with old varnish layers and have sometimes been abraded or even lost in past restorations. For a recent discussion on the color changes of smalt (and the fading of red lakes) see Marika Spring, N. Penny, R. White, and M. Wyld, “Color change in *The Conversion of the Magdalena* attributed to Pedro Campaña,” *National Gallery Technical Bulletin*, Vol. 22 (2001), pp. 54–63.
39. Laurent Sozzani, “An unanticipated use of a transparent red glaze in the later paintings of Nicolaas Maes” in summaries of posters at the IIC Dublin Congress, 1998, *Painting Techniques, History, Materials and Studio Practice*.
40. A good example can be seen in many paintings of Jacopo Tintoretto where transparent glazes give color to forms freely undermodeled in white.
41. Other paintings, when fully examined, may also reveal similar glaze applications. Future examination of paintings by artists such as Daniel Mytens, Sir Peter Lely, and Herman Verhelst, to name only a few, whose pictures have red glaze passages reminiscent of the overall glazing of Maes, may provide more examples. Recognizing a glaze as an overall undifferentiated layer can be difficult if a painting has not been completely cleared of old oxidized varnish layers. An oxidized varnish can mask the appearance when viewed in uv light. An example of an overall undifferentiated glaze of verdigris over completed undermodeling has been reported on a painting by Jan Baptist Weenix (1621–1660), *A Dog and Cat Near a Disemboweled Deer* (Rijksmuseum SK-A 591); Arie Wallert (ed.), *Still Lifes: Techniques and Style, An Examination of Paintings from the Rijksmuseum* (Amsterdam, Rijksmuseum, 1999), p. 91 (published to accompany an exhibition). For more on verdigris glazes see Margriet van Eikema Hommes, “Verdigris glazes in historical oil paintings: recipes and techniques,” *ZKK-Zeitschrift für Kunsttechnologie und Konservierung*, 15.2001, Vol. 1, pp. 163–95.
42. Red lake pigments made from dyestuffs precipitated on aluminum hydroxide (or less commonly onto calcium carbonate) have been identified in easel paintings from the early fifteenth century to modern times. Numerous common names have been used in texts for these reds. These derive from either the morphology of the source: *grana* (grains), *cimatura de grana* (shearings of grain-dyed textiles), *coccus* (berries), *vermiculum* (worms); the color: carmine, sanguine (blood), topias (topaz); or the place of manufacture: Florentine lake, Venetian lake, Paris red (generally cities with large trade monopolies). Recipes from 1400 to 1900 for lake dyes cite brazilwood, the madder plant and the scale insects—lac, kermes and cochineal—as the primary source material. All, with the exception of brazilwood, which is only rarely found in paintings, have been identified in numerous easel paintings analyzed by researchers. In the Netherlands up to the early seventeenth century kermes, madder, and occasionally Old World (Polish) cochineal were the primary sources for the red lakes. After 1600 New World cochineal becomes the predominant source material for red lake used in the Netherlands. Cochineal is the source of the colorant found in the glazes of Maes. See also J. Kirby, “A spectrophotometric method for the identification of the lake pigment dyestuffs” (*National Gallery Technical Bulletin* (Sept. 1977), pp. 35–45) for a detailed description of various red lake colorants.
43. Analysis was carried out by Christopher McGlinchey, Museum of Modern Art, New York, NY. Samples of red were first examined by microscopic methods where it was determined that the red pigment was an amorphous, low refractive index pigment with no visually observable auto-fluorescence. For paintings of this date, these characteristics suggest the use of carmine. The samples were subsequently extracted according to the procedure described in a chapter on carmine by Helmut Schweppe and Heinz Roosen-Runge (*Artists' Pigments*, Robert L. Feller (ed.), Oxford: Oxford University Press, 1986, Vol. 1, p. 276). The red extract was characterized by FTIR microscopy and indicates absorption spectra similar to free carminic acid. This indicates a colorant derived from the dried bodies of cochineal insects, assumed to be New World *Dactylopius*

- coccus* Costa. This confirmed a previous analysis by Arie Wallert of the Rijksmuseum that also identified cochineal lake in a transparent red sample from a Maes painting. He used direct temperature resolved mass spectrometry (DTMS), photo luminescence spectrometry (PLS), thin-layer chromatography (TLC), and microchemical tests; Sozzani 1998 (cited in note 39). For further discussion on analytical methods see J. Kirby and R. White, "The identification of red lake pigments and a discussion of their use," *National Gallery Technical Bulletin*, 17 (1996), pp. 56–80.
44. We would like to thank Margriet van Eikema Hommes, Ph.D., Kunsthistorisch Instituut der Universiteit van Amsterdam, for supplying many of the following source references. These were gleaned from her research for her doctoral thesis: *Discoloration in Renaissance and Baroque Oil Paintings, Studies into Painting Recipes, Theoretical Concepts and Scientific Data* (published by Archetype Publications, London, in 2004 as *Changing Pictures: Discoloration in 15th to 17th Century Oil Paintings*).
 45. Francisco Pacheco, *Arte de la Pintura*, 1649, from *Artists' Techniques in Golden Age Spain: Six Treatises in Translation*, edited and translated by Zahira Veliz. Cambridge: Cambridge University Press, 1986, p. 73.
 46. G.P. Lomazzo, *A Tracte Containing the Artes of Curious Paintinge, Carvinge & Buildinge*, English translation by Richard Haydocke. Oxford: Joseph Barnes, 1598 (Third book, Chapter IX), p. 107.
 47. For more on the use of verdigris glazes see van Eikema Hommes 2001 (cited in note 41).
 48. Filipe Nunes, *Arte poetica, e da pintura e symetria, com principios da perspectiva*, 1615, from Veliz 1986 (cited in note 45), p. 5.
 49. T. de Mayerne, *Pictoria Sculptoria et quae subalternarum artium*, 1620 (pp. 221–2), from *Quellen Für Maltechnik . . . De Mayyerne Manuskript*, Ernst Berger, Vaduz, Sändig Reprint Verlag, 1984, p. 282.
 50. Harley, ms 6376 British Library.
 51. Hessel Miedema, "Den grondt der edel vry schilder-const/Karel van Mander," edited, translated and annotated by Hessel Miedema. Utrecht: Haentjens Dekker & Gumbert, 1973, fol. 44.
 52. Smith 1692 (cited in note 28), p. 84.
 53. José Garcia Hidalgo, *Principios Para Estudiar el Nobilissimo y Real Arte de la Pintura*, 1693, from Veliz 1986 (cited in note 45), p. 135.
 54. Smith 1692 (cited in note 28), p. 84.
 55. See D. Saunders and J. Kirby, "Light-induced color changes in red and yellow lake pigments," *National Gallery Technical Bulletin*, 15 (1994), pp. 79–97. From the data presented here it can be assumed that the lake reds in all Nicolaes Maes paintings have faded slightly. Regarding the Columbia painting, a restoration report written in 1996 by Mario and Dianne Dwyer Modestini state that background elements are "... glazed broadly with a red lake. The final glazes have either faded or have been partly removed in past cleanings." From the Columbia Museum of Art files, dated April 14, 1996.
 56. Houbraken 1719 (cited in note 1), Vol. II, p. 274. Translation from Robinson 1996 (cited in note 3), p. 51.

PHOTOGRAPHY CREDITS

- Figs. 1, 2, 5, 6, 12, 15, 16, 24A, 24B, and 30, pp. 164, 169, 172, 173, 174, 180, and 182. Columbia Museum of Art, Columbia, SC, Samuel H. Kress Collection (CMA 1962.17).
- Figs. 3, 17, 19, 20A, 20B, 21A, and 21B, pp. 167, 178, and 179. Rijksmuseum, Amsterdam (SK-A 4881).
- Fig. 4, p. 168. Courtesy of the Timken Museum of Art, San Diego, CA.
- Figs. 7, 9, 11, 18, 22A, 22B, 23A, and 23B, pp. 170, 171, 172, 178, and 180. Rijksmuseum, Amsterdam (SK-A 1269).
- Fig. 8, p. 170. Rijksmuseum, Amsterdam (SK-A 1269). IRR montage assemblage courtesy of Monique Berends.
- Fig. 10, p. 171. Rijksmuseum, Amsterdam (SK-A 2666).
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- Figs. 25 and 28, pp. 181 and 182. Rijksmuseum, Amsterdam (SK-A 4889).
- Figs. 26, 27, and 29, pp. 181 and 182. Rijksmuseum, Amsterdam (SK-A 4888).
- Fig. 31, p. 183. Houbraken 1719 (cited in note 1), vol. II, p. 277.

