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MANUSCRIPT GUIDELINES FOR THE METROPOLITAN MUSEUM JOURNAL

Founded in 1968, the Metropolitan Museum Journal is a double-blind peer-reviewed scholarly journal published annually that features original research on the history, interpretation, conservation, and scientific examination of works of art in the Museum’s collection. Its scope encompasses the diversity of artistic practice from antiquity to the present day. The Journal encourages contributions offering critical and innovative approaches that will further our understanding of works of art.

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3. Word document or PDF of low-resolution images with captions and credits underneath. Please anonymize your submission for blind review.

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ABBREVIATIONS

MMA The Metropolitan Museum of Art
MMAB The Metropolitan Museum of Art Bulletin
MMJ Metropolitan Museum Journal

Height precedes width and then depth in dimensions cited.
As part of its founding purchase of 1871, The Metropolitan Museum of Art acquired *A Vase of Flowers*, a Dutch flower piece painted in 1716 by Margareta Haverman (1693–?) (fig. 1). To this day, the work remains the only painting in the Museum’s collection by an early modern Dutch woman.\(^1\) Purchased for 3,000 French francs, or about $500 at the time, the painting was among the more valuable acquired that year.\(^2\) And for good reason; it is a skillfully depicted arrangement of flowers, fruit, and insects set in a dark stone niche, with vibrant colors, subtle modeling, and an interplay of light and shadow that produce a dynamic and beautifully crafted still life. The flowers depict bloom in a range of seasons, meaning the artist could never have observed this bouquet from life but rather used her imagination to assemble its individual component flowers.
Margareta Haverman (Dutch, 1693–?). A Vase of Flowers, 1716. Oil on walnut panel, 31 1/4 x 23 3/4 in. (79.4 x 60.3 cm). The Metropolitan Museum of Art, Purchase 1871 (716)
The result appears at once hyperreal in its intricate detail and artificial in its gravity-defying blossoms. It evokes both a sense of abundance, with costly hyacinths and Baguette tulips, and transience, as hints of decay remind the viewer of the fleeting nature of time (fig. 2). The work stands as the Museum’s most significant Dutch flower painting.

**MARGARETA HAVERMAN**

Despite her evident skill, relatively little is known about Haverman’s life and work. The city archives in Breda record her Lutheran baptism there on October 28, 1693. Her father, Daniël Haverman, was a native of Oldenburg, employed at the time of his marriage to Margareta Schellinger in 1686 as a “secretary to the King of Denmark.” In a February 1722 article about Haverman’s admission to the Académie Royale de Peinture et de Sculpture in Paris, the French newspaper *Le Mercure* described her father as a “German gentleman” and her mother as coming from “a very good Amsterdam family.” By 1703, the Havermans were in Amsterdam, where Haverman’s father opened a school for boys. According to *Le Mercure*, Haverman’s teachers were the Flemish artist Anthon Schoonjans, a history painter and portraitist with ties to the Danish court, and the celebrated flower painter Jan van Huysum. Haverman shared her eventual specialization in still life with a number of other early modern female painters in the Low Countries, such as Clara Peeters (act. 1607–21) and Rachel Ruysch (1664–1750), a consequence of women being denied access to study of the nude model during their artistic training.

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**FLOWERS AND FRUIT**

1. Opium poppy foliage (*Papaver somniferum pseudoplenum rubrum*)
2. Cabbage rose (*Rosa x centifolia*)
3. Alyssum (*Alyssum alyssoides*)
4. Pot marigold (*Calendula vulgaris plena*)
5. Forget-me-not (*Myosotis palustris*)
6. Dwarf morning glory (*Convolvulus tricolor*)
7. White rose (*Rosa x alba*)
8. Lilac auricula (*Primula x pubescens lilacina marginata*)
9. Red catchfly (*Lychnis viscaria*)
10. Light blue hyacinth (*Hyacinthus orientalis subplenus pallidocoeruleus*)
11. Hollyhock (*Alcea rosea plena albo-ochrascens*)
12. Passionflower (*Passiflora coerulea*)
13. Saxifrage (*Saxifraga rotundifolia*)
14. Meadow grass (*Poa pratensis*)
15. Maltese cross (*Lychnis chalcedonica plena*)
16. New York aster (*Aster novi-belgii*)
17. Persian tulip hybrid (*Tulipa clusiana x T. stellata*)
18. Pepperwort (*Lepidium ruderale*)
19. Baguette tulip (*Tulipa stellate x T. clusiana*)
20. English iris (*Iris latifolia*)
21. White hyacinth (*Hyacinthus orientalis plenus albo-purpurescens*)
22. Brown-violet auricula (*Primula x pubescens badia*)
23. Feverfew (*Tanacetum parthenium*)
24. Sweet violet (*Scabiosa atropurpurea*)
25. African marigold (*Tagetes patula*)
26. Jasmine (*Jasminum officinale*)
27. Apple (*Malus sylvestris*)
28. Violet auricula (*Primula x pubescens violaceo-caesia*)
29. White grapes (*Vitis vinifera*)
30. Black grapes (*Vitis vinifera*)

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**BUTTERFLIES**

a. Heath fritillary (*Mellicta athalia*)
b. Red admiral (*Vanessa atalanta*)

do. Yellow meadow ant (*Lasius flavus*)
e. Bluebottle fly (*Calliphora erythrocephala*)
f. Black ant (*Lasius niger*)
g. Garden bumblebee (*Bombus hortensis*)
h. Garden snail (*Cepaea hortensis*)

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*fig. 2* Species found in *A Vase of Flowers* (fig. 1).
The main literary source for Haverman’s early life is a passage in Johan van Gool’s 1751 life of Van Huysum. According to Van Gool, Van Huysum was so secretive that he refused to take on any students until Daniël Haverman persuaded him to accept Margareta as a “disciple” (Discipeles). According to the biographer Haverman’s “tireless zeal and diligence” soon led her “not only to copy [Van Huysum’s] paintings but also to paint beautifully from life; even to the amazement of connoisseurs, who came to see her work.” Jealous of his pupil’s achievement, Van Huysum is said to have used an unnamed misdeed (slechte daet) on Haverman’s part as a pretext to terminate her tutelage.

On July 25, 1721, Haverman married the widowed French merchant Jacques Mondoteguy in Amsterdam, and she soon accompanied her new husband to Paris. On January 31, 1722, Haverman was admitted to the French Académie Royale de Peinture et de Sculpture on the basis of “a picture of flowers and fruits” and received a commission for a further still life, prompting the discussion in Le Mercure cited above. Haverman attended the March 28 session of the academy, but her name then disappears from its records. The census of 1730 records a “Mr Montoteguy” living with his wife and children at Bayonne. No further details about Haverman’s subsequent life and artistic career are known.

In many respects, the Museum’s picture resembles Haverman’s untraced submission to the academy, as described in the February 1722 article in Le Mercure. This still life featured a “vase ornamented with bas reliefs . . . filled with flowers of all seasons, and posed on a marble base, with some fruit, such as peaches, grapes, et cetera.” The writer for Le Mercure singled out Haverman’s depiction of dewdrops, “which one thinks must fall at any moment,” as well as “the ants, the snails, the butterflies, and all manner of flies” swarming about her still life. The reception piece featured a “blade of hay, and a common little wildflower, with a broken stem, which make a contrast” to the rest of the bouquet; these details appear in the Museum’s painting as well. The Mercure writer gives the dimensions of the panel as “roughly thirty by twenty pouces,” equivalent to the size of the Museum’s picture.

Nonetheless, the writer’s mention of multiple “peaches” and a marble plinth caution against identifying the Museum’s painting with Haverman’s Parisian reception piece. Moreover, Haverman is unlikely to have submitted to the academy as a proof of her abilities a painting that was prominently dated six years prior. She may simply have repeated certain signature motifs across multiple paintings. Despite the paucity of her currently known oeuvre, at least a dozen works attributed to Haverman appear in eighteenth-century auction catalogues. For example, when the Museum’s picture appeared in eighteenth- and nineteenth-century sales, it was accompanied by another picture by Haverman, featuring a vase of flowers and a bird’s nest. But this possible pendant, like the rest of Haverman’s oeuvre, is untraced.

As noted by Klara Alen, Haverman’s still life shares a number of features with those of Van Huysum. A similar vase, for example, appears in a Van Huysum flower piece in Karlsruhe, and he made frequent use of stone alcoves as foils for overflowing, tulip-crowned arrangements. Haverman nonetheless asserted her authorship in the prominent signature on the plinth, a feature that recurs in her only other known surviving work, an arrangement of flowers in a glass vase now on deposit at Fredensborg Palace in Denmark (fig. 3). (The fact that both Haverman’s father and her teacher Schoonjans have
had ties to the court in Copenhagen may explain how this painting entered the Danish royal collection.

Over the years, a rumor has circulated that Haverman was expelled from the academy for submitting a work by Van Huysum as her own. Its earliest appearance in print appears to be a French-language auction catalogue from 1757, and it may derive from a misunderstanding of Van Gool’s Dutch text, published six years before. The latter’s mention of a scandal that “drove her father into the grave, and the whole household into ruin” is ambiguous and could possibly refer only to her acrimonious relationship to Van Huysum and subsequent marriage with Mondoteguy, not her brief membership in the academy. Indeed, at the time of her wedding, Haverman declared that she did not know “whether her father Daniël Haverman [was] alive or dead.” Ann Harris suggests the proficiency on display in A Vase of Flowers is evidence that Haverman had no reason to deceive the academy, and it is possible instead that she failed to submit the requested new piece altogether. Like many other early modern women artists, Haverman’s career may have been curtailed by marriage and childbirth.

There is little doubt that Haverman was an accomplished painter by the time she painted A Vase of Flowers. But with only one other securely attributed painting and a scant historical record, it is difficult to separate fact from fiction regarding this artist. For many writers, Haverman’s gender has colored discussion of her work, as well as doubts about its attribution. Reviewing the newly opened Metropolitan Museum of Art for the Atlantic Monthly in 1872, Henry James spoke of Haverman’s “almost masculine grasp of the resources of high finish.” In 2005, Fred Meijer praised the Museum’s painting and then declared that “in order to reach this result . . . Van Huysum must have guided Haverman’s brush almost continuously (assuming that she is indeed its author).”

**TECHNICAL STUDY**

To assist in a greater understanding of Haverman’s work, a technical study of A Vase of Flowers was undertaken along with treatment in preparation for the 2018 opening of the exhibition “In Praise of Painting: Dutch Masterpieces at The Met.” The intention was to learn more about Haverman’s painting technique, and through this information, to shed some light on her artistic motivations, singularity, and achievement. Noninvasive techniques such as X-radiography, infrared reflectography (IRR), and X-ray fluorescence mapping (MA-XRF) were used along with micro-sample analysis including optical microscopy, scanning electron microscopy, and Raman spectroscopy. The results suggest that by 1716, Haverman largely used materials and techniques common among flower painters of her era but that she altered aspects of this practice in unexpected ways in order to bring about results that aligned with her artistic vision. Haverman painted A Vase of Flowers on a wood panel measuring 79.4 × 60.3 centimeters, made not from the common oak but from a single, tangentially cut plank of walnut (juglans regia). To prime the panel, a remarkable total of six preparatory layers were applied overall. The first layer, thin and beige in color, is a mixture of lead white and a small proportion of ocher. Next is a white priming made from lead white and chalk (calcium carbonate). The four uppermost layers are distinct warm brown layers, each containing similar proportions of ocher and coarse-grained lead white pigment. The beige ground and at least two of the brown priming layers were also applied to the sides of the panel. The result is a remarkably smooth surface texture with no evidence of the wood grain below other than a subtle undulation across much of the surface due to the wood panel itself.

On top of the brown priming, Haverman began laying out her composition by blocking in the forms for
fig. 5 (a) Detail of the MA-XRF map for copper, showing the distribution of the copper-containing pigments both at the painting's surface and often in the underlying layers. The color in the MA-XRF map corresponds to areas where a signal for the element was detected. Here, vertical brushstrokes along the left side show Haverman’s rough initial copper-containing paint application beneath the final gray background, with a form for the opium poppy leaf—initially planned to be much smaller—left in reserve. (b) The corresponding photographic detail with the final, much larger opium poppy leaf resting on the pedestal.

fig. 6 Detail of the infrared reflectogram, showing that the red grapes at right, initially planned out using loose brushwork, were later shifted to their present location, indicated by the dark, infrared-absorbent contours of the gray pedestal.
some of the flowers and fruit, then partially indicating the gray stone niche (fig. 5a, b). She used subdued and unmodulated colors in this initial stage: a gray-green for the foliage, light gray for the Baguette tulip and roses, dark orange for the opium poppy, yellow-brown for the hollyhocks, warm beige for the lilac auriculas, and a darker tone for the shaded brown-violet ones. In some cases, the brown priming was left visible to act as the base tone for certain flowers, such as the Persian tulip hybrid, the contours of which were defined with the gray paint of the background niche.

Haverman demonstrated her creativity by making many alterations to the initial design while working up the final composition. Some of these changes were subtle. The red grapes were shifted from their original planned position (fig. 6), and while the final version of the Baguette tulip has several wilting petals, the initial plan shows a relatively featureless flower form, with only the lower left petal beginning to wilt. Other changes to the initial undermodeling fundamentally altered the composition. For instance, the large opium poppy leaf, which rests on the stone pedestal at the bottom left of the final composition, was initially blocked in with a flat gray-green tone with a much smaller footprint, leaving the stone pedestal visible below (see fig. 5a, b). And a cluster of blue flowers initially planned for the left side, adjacent to the hollyhocks, was ultimately excluded in the final composition (fig. 7b).

Haverman also refined the composition by making changes in the final stages of painting. For instance, in the upper right corner, three red flowers, probably Turk’s cap lilies, had been worked up nearly to completion before they were painted over and replaced with the green stem and leaves of an opium poppy bud (fig. 8a, b). Flowers like the African marigold, Maltese cross, and many of the smaller specimens were not part of the initial undermodeling, but were instead painted directly on top of the gray background.

In a few areas Haverman used the subdued colors of the undermodeling as a mid-tone for certain flowers, like the hollyhocks (fig. 9) and auriculas, and it can be glimpsed in areas between thin boundaries of color or through thinly painted passages. Most of the flowers and foliage are worked up economically, using a few thin layers to paint highlights and shadows over a mid-tone, but in some areas there are a remarkable number
fig. 8 (a) Detail of the MA-XRF map for mercury, showing the distribution of the orange-red pigment vermilion (mercury sulfide). In the upper right corner, three flowers (probably Turk’s cap lilies), which appear to have been painted with a high degree of finish, were painted out in the final composition (b).
of applications. For example, the translucency of the green grapes was achieved with up to seven layers, a few applied wet-in-wet and others executed on top of layers that had fully dried. Here the artist exploited the optical properties of different pigment mixtures by using opaque scumbles laid over translucent glazes, but the great number of layers are also likely representative of Haverman’s process of making revisions to perfect form and achieve a precise visual effect (fig. 10a, b). To paint the red grapes she blended ultramarine blue over a still-pliable transparent red lake base to create the delicate hazy bloom so characteristic of this fruit.

Haverman used a wide range of pigments, including lead white, carbon- and bone-based blacks, earth pigments such as yellow and red ochers, brown umbers, and green earth, ultramarine, Prussian blue, vermilion, lead tin yellow (type 1), Naples yellow (lead antimonate), red and yellow lakes, and a copper-based green glaze, mixing and layering these colors to precisely render her subjects. The colors were chosen and mixed by the artist with extreme care and an eye for accuracy, but some color shifts related to unstable pigments have occurred over time, altering the appearance of the painting. The green foliage, composed of a mixture of Prussian blue, lead tin yellow, and yellow lake pigments, has shifted toward a blue hue as the fugitive yellow lake has faded. The copper glaze used locally on some of the leaves—not as an overall layer—has also likely discolored in some areas, and the combination of this discoloration along with the fading of the surrounding paint layers produces an odd visual effect.

Haverman employed a range of brushstrokes to achieve different visual effects. She used recurring short strokes, as in the stems and leaves of the hollyhocks, to produce the illusion of a fuzzy surface. To indicate smooth, delicate surfaces she used long but confident and precise brushwork; this technique is exemplified by the lightly overlapping strokes used to make the petals on the tulips. She varied the thickness of the paint to project forms forward or allow them to recede, adding to the illusion of reality. The highlights of the roses and white hyacinths, for instance, were made using pastose (thickly applied) strokes, with thin layers of ultramarine and vermilion added in low relief to suggest the surrounding shadows. The paint handling is always meticulous, indicative of the great care the artist took in painting this work.

A comparison of these results with technical studies of paintings by Van Huysum and other Dutch flower painters, as well as contemporary technical literature, suggests that Haverman worked within a tradition typical of an early eighteenth-century Dutch flower painter, following the teachings and style of her teacher closely. But she also made specific choices within that context that offer glimpses into her...
is stylistically consistent with works produced between 1714 and 1720, a period during which Van Huysum painted dramatically lit flower arrangements against a dark background, a convention also common during the seventeenth century. The priming, along with an underlying light brown layer, was also applied on the sides and back of this panel.

It is difficult to know if this warm brown preparatory color was common for Van Huysum, as little technical information on paintings from this period is published. However, the number of preparatory layers that Haverman applied is notable and would seem to be without precedent in Van Huysum’s work. His preparations are typically described as consisting of one or two layers, and texture from the panel’s wood grain is often visible on the surface of many of his works, which suggests that relatively thin preparations are common. In the seventeenth century, artists were known to sometimes employ a priming specialist, or primuurder, to apply the first ground layers. It is possible in this case that Haverman used a primuurder to apply the beige ground and perhaps also the overlying white layer, but the unusual number of brown layers suggests they were applied by the artist herself with the intention of obtaining an impeccably smooth surface devoid of any distractions from the wood grain. Why the artist determined that so many layers were necessary is unclear, although it is likely she was attempting to conceal the waviness of the panel. The unusual buildup of preparatory layers does suggest, however, that Haverman was willing to adjust the approach passed down from her teacher in order to produce a surface that aligned with her own standards and artistic vision.

Panel Preparation

The dimensions of Haverman’s panel support are almost identical to those preferred by Van Huysum, but her choice of walnut is unusual. Oak was by far the most common panel support used in the northern Netherlands, with species like beech, pine, fir, lime, cedar, pear, Indian wood, walnut, and mahogany used less frequently. Van Huysum’s panels are typically identified as either oak or mahogany, but one undated pendant pair made in the artist’s post-1720 style, now at the Kunsthistorisches Museum in Vienna, is described as walnut. Willem van Leen, a late eighteenth-century flower painter who worked in Van Huysum’s style, recommended oak or mahogany as the best panel supports in an unpublished manuscript. The fact that Haverman’s panel is made from a tangentially cut board, rather than the more dimensionally stable radial cut, suggests it was more affordable for the younger Haverman, who had not attained the same level of fame and success as her teacher.

The warm brown color of Haverman’s preparation is consistent with at least one of Van Huysum’s works on long-term loan from the City of Amsterdam to the Rijksmuseum. Examination of damage along the painting’s edges revealed a warm brown preparatory layer with coarse-grained lead white particles strikingly similar to what Haverman used. Although undated, it
The changes Haverman made during the dead-coloring stage, as well as in later stages of painting, suggest that she was actively engaged in designing her own composition throughout the painting process. Rather than working from a prepared design, Haverman drafted the composition on the panel itself, laying in an initial arrangement of forms, and then returning to revise the contours, adjust the placement of flowers, or paint out and replace entire elements. In his 1604 Schilder-boeck, Karel van Mander describes in a poem how assistants used dead-coloring to invent compositions on the spot for the master to complete later:

And without much ado, they go for it with brush and paint, and invent freely.

Haverman may well have worked in a similar fashion. Whereas the final composition of A Vase of Flowers strongly resembles works by Van Huysum, with almost direct quotations taken from his paintings (fig. 12), it is clear that this painting is not a copy of his work. Haverman gave keen consideration to which flower and fruit species to include, and where in the composition these elements would be most effective. Marianne Berardi notes that Haverman’s Fredensborg work is slightly awkward in its arrangement, but that this very characteristic suggests the composition is her own. A Vase of Flowers can safely be considered an original work as well, considering the number of artist’s changes, but in this case, the painting’s overall effect is far more successful, representing a step forward in Haverman’s development as an artist.

New Pigments

The pigments Haverman chose for this painting may also provide clues about her motivations and artistic singularity. Most of the pigments Haverman used to paint A Vase of Flowers are commonly found in seventeenth- and early eighteenth-century Dutch paintings. Haverman’s use of Prussian blue and Naples yellow, on the other hand, is remarkable. Neither of the pigments was prevalent among artists in Amsterdam at the time, and the choice may suggest a willingness to experiment and innovate in advance of most of her contemporaries.

Prussian blue, which was found in Haverman’s painting mixed with lead tin yellow and yellow lake to make green for the foliage, is known as the first modern synthetic pigment. It was first fortuitously synthesized by Johann Jacob Diesbach in Berlin, likely about 1706. Over the coming years, Prussian blue replaced other blue pigments with well-known drawbacks, like coarse-grained azurite and smalt, costly natural ultramarine, and fugitive indigo. The earliest easel painting known to contain Prussian blue was painted in 1709 and the earliest known use in Holland is in 1715. The first written record of the sale of Prussian blue in Amsterdam, obtained from a seller in Leipzig, is dated 1722, and the production process of the pigment remained a closely guarded secret until it was published in England in 1724.
Thus, Haverman’s adoption of the pigment in 1716 must be considered exceptionally early.\(^{58}\)

Naples yellow, which Haverman used only in the peach (fig. 13a, b),\(^{59}\) is known to have replaced lead tin yellow during the course of the eighteenth century. In Holland, Naples yellow became more abundant than its predecessor by about 1750, but early in the century it was not commonly used. The first known mention of the pigment in the Netherlands is in a 1708 letter from Rotterdam painter Hendrik van Limborch to Lambert ten Kate, a connoisseur who knew Van Huysum. Early in the eighteenth century, however, Naples yellow, which is a manufactured pigment, was believed in the North to be a natural pigment gathered from the slopes of a volcano in the South.\(^{60}\) This suggests the pigment was accessible exclusively as an import at this time, and so would not have been widely available.\(^{61}\) A number of painters during the late seventeenth and early eighteenth centuries used Naples yellow, but all of those identified so far appear to have one of two things in common: they worked either in Italy or for the court of Johann Wilhelm II, Elector of the Palatinate, a territory of the Holy Roman Empire.\(^{62}\) All, that is, except for Haverman.

How did Haverman obtain these two relatively inaccessible pigments? Van Huysum used both, but only in works that are firmly dated 1722 or later.\(^{63}\) It is possible instead that another artist of the day shared them with her. Rachel Ruysch, an internationally renowned flower painter, worked in the court of Johann Wilhelm II beginning in 1708. The Elector was a major patron of the arts, who attracted large numbers of artists to his court until his death in 1716. Among these was Pieter van der Werff, who is known to have had access to Prussian blue early on.\(^{64}\) The Electress Anna Maria Luisa de’ Medici, daughter of Cosimo III de’ Medici, also patronized the arts and actively encouraged artistic exchange between Florence and Düsseldorf, which could have easily provided the court painters with access to Naples yellow. Ruysch, who may have been a role model for the younger Haverman,
vision, applying an unusual number of preparatory layers to obtain a near-perfect surface and utilizing new and uncommon pigments.

The study of one painting cannot answer all the queries that remain about Haverman. Further technical investigations of other still life painters from the early eighteenth century, a period that has been neglected compared to the preceding century, may help to clarify outstanding questions, and it could help reattribute works that rightfully belong in Haverman’s oeuvre.

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returned home to Amsterdam from Düsseldorf following the Elector’s death in 1716. In that year, the same year that Haverman made A Vase of Flowers, Ruysch painted a work that contains both Prussian blue and Naples yellow (fig. 14).65

This study of A Vase of Flowers begins the process of clarifying Haverman’s artistic motivations, singularity, and achievement, and it reveals Haverman as a mature painter in her own right—not simply a talented student who relied on copying her teacher (or passing off his work as her own). Although she was influenced by Van Huysum’s style and borrowed freely from his compositions, A Vase of Flowers is a unique work of art that Haverman reworked and improved at all stages of painting. Haverman’s technique is also closely related to that of Van Huysum, but examination of the Museum’s painting makes clear that she was willing to deviate from his approach when it suited her artistic
NOTES

1 The 1871 Purchase also included a flower painting then attributed to Rachel Ruysch; however, the work was later reattributed to the late eighteenth-century copyist Johannes Christian Roedig and deaccessioned from the Museum’s collection in 1991.
2 Baetjer 2004, p. 182.
3 For more on the symbolism of flower paintings, see Taylor 1995 and Segal 2007.
4 This biographical account and the archival sources are derived from Alen 2010 and Huiskamp 2014.
5 Collectie DTB Breda, deelnr. 93, Dopen Luthers 1649–1745, p. 44v, d.d. 28-10-1693, Stadsarchief Breda.
6 “secretaris van zijn koninklijke majestijt van denemarken”; cited in Alen 2010, p. 10.
7 “Gentilhomme Allemand”; “d’une très-bonne famille d’Amsterdam”; Le Mercure 1722, p. 114.
8 Van Gool 1751, p. 32; note, however, the reservations of Alen 2010, p. 11.
9 Le Mercure 1722, p. 114; see also Alen 2010, pp. 28–29.
10 For an introduction to seventeenth-century Dutch women artists, see Kloek, Peters Sengers, and Tobé 1998.
11 Van Gool 1751, pp. 32–33.
12 “eenen onvermoedten yver en naerstigheid”; “dat zy zyne Kunsttavereel niet alleen wel copieerde, maer fraei naer ‘t leven schilderde; ja zelfs tot verbazing van de Liefhebbers, die haer werk quamen zien.” Ibid., p. 32.
13 DTB, Trouwen, 712, p. 440, d.d. 25-7-1721, Stadsarchief Amsterdam.
14 “un tableau de fleurs et de fruits”: Montaiglon 1881, p. 328. Unusually, Haverman was immediately admitted as an académicienne without first being classed as an agrée, the initial, provisional stage of membership; on this point, see Alen 2010, pp. 32–33.
15 Montaiglon 1881, p. 332.
16 Huiskamp 2014.
17 “Un vase orné de bas reliefs . . . rempli des fleurs de toutes les saisons, & posé sur une base de marbre, avec quelques fruits, comme pêches, raisins, &c.” Le Mercure 1722, p. 112.
18 “certaines goutes de rosée . . . qu’on croit à tout instant devoir tomber”; “Beaucoup de fourmis, des colimaçons, des papillons & des mouches de toute espece [sic]”; “une espece [sic] de paille ou brin de foin, & une méchante petite fleur des champs, dont la tige est rompue”; Ibid., p. 113.
19 Ibid., p. 112.
20 For Haverman’s work in eighteenth- and nineteenth-century auction catalogues, see Alen 2010, pp. 65–73.
21 Ibid., pp. 49–51.
23 “Dit geval sleepte haeren Vader in ’t graf, en ’t heele huisgezin in ’t verderf”; Van Gool 1751, p. 33.
24 “en Weet niet, off haar Vader Daniel Haverman Leeft off doot is”; the marriage license is transcribed in Alen 2010, p. 87.
27 [James] 1872, p. 763. James applied this dubious praise to both Haverman’s picture and the still life, discussed in note 1 above, that was then attributed to Rachel Ruysch.
28 Letter from Fred G. Meijer to Walter Liedtke, November 21, 2005, in the Department of European Paintings, object file for MMA 71.6.
29 X-ray fluorescence mapping (MA-XRF) of A Vase of Flowers was carried out using a Bruker M6 Jetstream instrument with the X-ray source operated at 50 kV and 0.5 mA. A 700 micron spot size and a 700 micron step size were used, with a dwell time of 75 msec/pixel for mapping the overall painting, and 300ms/pixel for the detail with the peach and the green grapes. Raman spectroscopy measurements were done on sample cross sections using a Renishaw System 1000 coupled to a Leica DM LM microscope. All the spectra were acquired using a 785 nm laser excitation focused on the samples using a 50x objective lens, with integration times between 10 and 120 s. A 1200 lines/mm grating and a thermoelectrically cooled CCD detector were used. Powers at the sample were set between 0.5 and 5 mW using neutral density filters. SEM-EDS analyses were performed on selected carbon-coated cross sections with a FE-SEM Zeiss Sigma HD, equipped with an Oxford Instrument X-Max® 80 SDD detector. Backscattered electron (BSE) images, energy-dispersive spectroscopy (EDS) analysis, and X-ray mapping were carried out with an accelerating voltage of 20kV in high vacuum.
30 At the request of Léon Gauchet (1825–1907), the Belgian dealer who facilitated the Museum’s founding purchase, the reverse of the panel was thinned and cradled by Paul Kiewert in Paris, just prior to its arrival at the Museum in 1871. See Baetjer 2004, pp. 163, 167, 210.
31 All six preparatory layers are visible in the paint sample from the poppy leaf at lower left (sample 1b) and the red grape (sample 2), as well as in damages and abrasions along the painting’s edges. Other samples contained only fragments of the preparatory layers or none at all.
32 The mixture of lead white with calcium carbonate, known as loot wit, was cheaper than the pure lead white schuipwit, and was often employed in preparatory layers. Thin curving trails visible in the X-radiograph appear consistent with application of at least one of the layers with a knife. This technique of applying a ground layer is described in contemporary artist manuals. See Wallert 1999, pp. 11, 15.
33 No underdrawing was detected in this painting using IRR, although the brown priming may suggest that if an underdrawing exists it may have been executed in a light color, like white chalk, which would not be detectable using IRR. The brushwork for this initial gray layer can be seen in the XRF distribution map for copper, especially in the dark gray—almost black—area on the left side. This suggests that verdigris was added as a drier to help the medium-rich preparatory layer dry more quickly. Such a practice has been found in many seventeenth-century Dutch paintings and it was recommended by Theodore de Mayerne (1573–1655) in his manuscript (Gifford and Glinsman 2017, pp. 69–70).
34 These blue flowers may relate to a similar-looking cluster on the left side of A Vase of Flowers by Van Huysum (Statens Museum for Kunst, Copenhagen) (fig. 12), probably a variety of lilac. Additional changes in the undermodeling stage include the removal of an ovoid form (perhaps a melon or a dish) from behind the grapes where the black grapes currently sit; the enlargement...
of the pedestal by extending its back edge toward the niche; and the upward shift of the green grapes, which initially spilled over the edge of the pedestal and out of the picture plane.

35 Additional changes made in the later stages include a yellow flower, possibly a rose, on the right side where an opium poppy leaf currently sits; the reduction in size of the orange-red African marigold just below the Baguette tulip; greater definition in the right contours of the terracotta vase; the addition of a drooping petal on the Persian tulip hybrid; and the adjustment of the placement of its stem.

36 The transparency of the paint has surely increased over time due to abrasion and possibly due to the formation of metal soaps.


38 Wadum 1998, pp. 150–51. Almost all oak used for panel paint-
ings was imported from the Baltic region until 1655, the begin-
ing of the First Northern War. After this date, oak was sourced from northern Germany and the Netherlands (Wallert 1999, p. 7; see also Wadum and Streeton 2012, pp. 86–90).


40 Rijksmuseum (SK-C-561).

41 Eighteenth-century Dutch paintings by Rachel Ruysch, Matthijs Naiveu, Jan van Huchtenburg, Nicolaas Verkolje, and Jacob de Wit have also all been found to have a similar brown ground containing coarse-grained lead white particles. See Groen, Keijzer, and Baadsgaard 1996, p. 361, and Wallert 1999, p. 99.

42 See Segal 2007, pp. 55–56, for Van Huysum’s stylistic progression.

43 After about 1720, Van Huysum began to paint his flower pieces in lighter, gardenlike surroundings, and the color of his grounds shifted accordingly to lighter hues; see Dik and Wallert 1998, pp. 395–98, and Dik 2007, p. 69.

44 A work that likely dates slightly after the 1714–20 period, in the Kunsthistorisches Museum, Vienna (GO560), also has a gray preparatory layer with an overlying warm brown visible on the sides and back, according to an examination of the surface by paintings conservator Ina Slama (email message to Gerrit Albertson, June 22, 2018).

45 A painting likely dating to 1714–20, now in the National Gallery of Art, Washington, D.C. (1996.BP.1), is described as having a much lighter, “buff-colored” ground (Wheelock 2014, technical summary), although no samples were taken according to paint-
ings conservator Kari Rayner (email message to Gerrit Albertson, June 14, 2018). Two Van Huysum paintings at the J. Paul Getty Museum, Los Angeles, a flower piece (82.PB.70) and fruit piece (82.PB.71), both of which are dated 1722 by the artist, have a beige and light brown colored ground; see Dik and Wallert 1998, pp. 395–98.


47 See Wallert 1999, p. 11.

48 De Keyser et al. 2017, p. 4.


50 J. Paul Getty Museum, Los Angeles (82.PB.71). On the other hand, there is evidence that Van Huysum sometimes transferred compositions prepared on paper to his paintings using a grid. One such grid, probably drawn in graphite or black chalk, was found on a 1723 flower piece from the Rijksmuseum (SK-A-188), and sketches by the artist survive that correspond closely to finished paintings.
all painters who were employed by the Elector of the Palatinate in Düsseldorf, were found by Ian Wainwright, John Taylor, and R. D. Harley (1986, pp. 245–46) to have used Naples yellow. See Groen, Keijzer, and Baasdgaard 1996, pp. 364–65. Arie Wallert notes the use in a work by Rachel Ruysch, also a Düsseldorf court painter (Wallert 1999, p. 100).

63 Naples yellow and Prussian blue were identified in the Getty flower and fruit pieces (82.PB.70 and 82.PB.71) from 1722 (Dik and Wallert 1998, pp. 404–7) and the Rijksmuseum’s flower piece (SK-A-188) from 1723 (Wallert 1999, p. 111). Naples yellow was also identified by Corina Rogge (2018) in a flower piece at the Museum of Fine Arts, Houston, which is undated, but dated by Sam Segal to 1716 or 1717, as well as another undated work at the National Gallery, London, dated by Segal to about 1718 (Marika Spring, personal communication). Notably, the blue in the National Gallery painting was identified as indigo, a pigment with similar properties to Prussian blue (Roy 1997). For dates of the latter two works, see Segal’s catalogue entries in Segal 2007, pp. 147 and 168.

64 It is also noteworthy that Hague painter Coenraet Roepel (1678–1748), another flower painter who worked for the Elector for a short period in 1716, used Prussian blue in a flower piece (SK-A-336) and in a fruit piece (SK-A-337), both dated 1721 (Rijksmuseum, Amsterdam). See Wallert 1999, pp. 104–6.

65 Ibid., p. 100.

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Stone Sculpture and Ritual Impersonation in Classic Veracruz: age fotostock / Alamy Stock Photo, photo by Ignacio Guevara: fig. 18; Courtesy of the Division of Anthropology, American Museum of Natural History, photo by John Bigelow Taylor: fig. 8; Archivo Digital de las Colecciones del Museo Nacional de Antropología. INAH-CANON: figs. 7, 17; Courtesy of Caitlin Earley: fig. 10; Drawing by Ian Graham. © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology: fig. 13; Photo by Justin Kerr: figs. 11, 14; From Koontz 2009a, pp. 39, 53, 57, 67; Image © The Metropolitan Museum of Art, photo by Heather Johnson: figs. 9, 15a, c, 19; From Ladrón de Guevara 1999, p. 76; Image © The Metropolitan Museum of Art, photo by Heather Johnson: fig. 16; Image © The Metropolitan Museum of Art: figs. 3, 4; Image © The Metropolitan Museum of Art, photo by Joseph Coscia Jr.: figs. 1, 5, 6; From Proskouriakoff 1954, Image © The Metropolitan Museum of Art, photo by Heather Johnson: fig. 15b; Drawing by Linda Schele © David Schele. Photo courtesy of Ancient Americas at Los Angeles County Museum of Art: fig. 12; Courtesy of Cherra Wylie: fig. 10

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The Cornish Celebration Presentation Plaque by Augustus Saint-Gaudens: Newly Identified Sources: Dalton Alves / NPS: fig. 15, Image © The Metropolitan Museum of Art: figs. 1–4, 8–11, 13, 14; Museum of Fine Arts, Boston: fig. 16
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