

## From Florence to Bologna: examination and treatment of Giuliano Bugiardini's *Madonna and Child with Saint John the Baptist*

Nica Gutman Rieppi



*Madonna and Child with Saint John the Baptist*, c. 1523-25  
113 x 81.5cm, Oil on cradled panel  
Allentown Art Museum, Pennsylvania, Samuel H. Kress Collection, 1961.  
(1960.10)

Giuliano Bugiardini's *Madonna and Child with Saint John the Baptist*, part of the Samuel H. Kress collection at the Allentown Art Museum, is among the artist's best known works, most of which depict the Virgin and Christ Child with the infant Saint John the Baptist. Although a prolific artist, Bugiardini's creative process has not been studied. Recent technical examination and restoration of the painting by Nica Gutman Rieppi, Associate Conservator for the Samuel H. Kress Program in Paintings Conservation, provided an opportunity to observe some of the artist's painting techniques, to identify some of his materials, and to gain a better understanding of his studio practice. During the initial visual examination of the painting, brushwork unrelated to the final image was observed prompting a more detailed investigation using a variety of analyses including stereomicrography, x-radiography, infrared reflectography, cross-section examination and fiber optics reflectance spectroscopy. Various changes in the composition, made both in the preparatory drawing stage and during the build-up of the paint layers were revealed. Comparison with his earlier painting of the same subject, the *Madonna and Child with Saint John* at the Galleria dell'Accademia in Florence, helps us better understand the changes identified in the Allentown painting and illustrates the artist's formal evolution.

## Artist

An Italian painter and draughtsman, Giuliano Bugiardini (b. 1475 d. 1574) was associated with the 16th c. Florentine Mannerist style of painting. Born Giuliano di Piero di Simone Bugiardini, he was also known as Giuliano di Piero di Simone. According to the 16th-century biographer and artist Giorgio Vasari (1511-1574), Bugiardini first studied with the sculptor, Bertoldo di Giovanni, and began his training in painting as an apprentice in the studio of Domenico Ghirlandaio (1449 – 1494). It was in Ghirlandaio's studio that Bugiardini was introduced to Michelangelo (1475 – 1564), whom he assisted on the frescos of the Sistine Chapel ceiling. While his early work reflects the style of his master, his mature work was strongly influenced by Mariotto Albertinelli (1475-1515), whom he met through the artists' guild, the *Compagnia di San Luca*, and with whom he shared a studio from 1503 until 1509, when Albertinelli joined the workshop of Fra Bartolommeo (Baccio della Porta, 1472 – 1517).



Anonymous artist, *Portrait of Giuliano Bugiardini*, engraving from "Le Vite" by Giorgio Vasari, edition of 1568.

Bugiardini's *Madonna and Child with Saint John the Baptist* (Allentown Art Museum) shows the artist's awareness of the Florentine works of Raphael (1483 – 1520), in particular, the subject matter and iconography of Raphael's *The Holy Family with a Palm Tree* (1506), and the pyramidal composition of Raphael's *Esterhazy Madonna* (1508).



Giuliano Bugiardini, *Madonna and Child with Saint John the Baptist*, c. 1523-25  
113cm H x 81.5cm W, Oil on cradled panel  
Allentown Art Museum, Pennsylvania  
Samuel H. Kress Collection  
Photo: Allentown Art Museum,  
Samuel H. Kress Collection, 1961. (1960.10)



Raphael (Raffaello Sanzio), *Madonna and Child with the Infant Saint John. The Esterhazy Madonna*, 1508  
28.5cm x 21.5cm, Tempera and oil  
The Museum of Fine Arts, Budapest  
Photo: Razso Andras  
©The Museum of Fine Arts Budapest/Scala / Art Resource, NY

## Provenance and Chronology



Giuliano Bugiardini, *Madonna and Child with Saint John the Baptist*  
c. 1523-25, 113 x 81.5cm, Oil on cradled panel  
Allentown Art Museum, Pennsylvania  
Samuel H. Kress Collection, 1961. (1960.10)  
Photo Credit: Allentown Art Museum, Samuel H. Kress Collection, 1961. (1960.10)



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The *Madonna and Child with Saint John the Baptist*, which was purchased by the Samuel H. Kress Foundation in 1931 and given to the Allentown Art Museum in 1960, was for many years erroneously documented as an early work in Bugiardini's *oeuvre*. Signed in gold with an elegantly abbreviated signature, "IVL.FL.F." (*Julianus Florentinus Fecit*), but not dated, it was believed to have been painted around 1510, not long after Raphael's *The Holy Family with a Palm Tree* and the unfinished *Esterhazy Madonna* in Budapest. Consequently the *Madonna and Child with Saint John the Baptist*, in the *Galleria dell' Accademia* in Florence, which is fully signed and dated, "*JULIANUS FLORENTINUS FACIEBAT 1520*," was considered an elaboration of the subject of the Allentown painting, revisited by the artist a decade later. However, recently discovered 17th century archival material has identified the Allentown painting in the Oratory of the Church of Santa Maria di Galliera in Bologna, indicating that it was painted during the artist's Bolognese sojourn, between 1523 and 1525, and thus, the later of the two paintings.

The earliest known mention of the Allentown painting was by the 17th century historian A. Masini in 1650 as, "a small painting which decorates the altar of the Oratory [of Santa Maria di Galliera]." The painting was still in the Oratory in 1803 when it was published in a guidebook of Bologna. In his travel diaries, the dealer and art historian Otto Mundler, noted that the painting was being offered for sale during his visit to Bologna on September 17, 1857, "Palazzo Aldovadi contains some pictures for sale...Madonna di Gallier a

picture recently discovered, Virgin and Child with S. John the Baptist. The infant child is breaking a fruit from a palm tree; S.



Interior of the church of Santa Maria di Galliera, Bologna. Photograph: Guido Piacentini, Comune di Bologna, Musei Civici d'Arte Antica



John is extending his hands toward it. The figures are 2/3 size of life. -2 f. 8 ½ in. w. 3 f. 8 in. h. w ... The picture has been recently restored. –For sale, but a large price demanded- Marked IVL.FL.F (the well known signature of Giulio Bugiardini).” Otto Mundler was appointed by Sir Charles Eastlake, Director of the National Gallery of Art in London, to investigate new acquisitions. Perhaps based on Mundler’s advice, Eastlake considered purchasing the painting in 1862, but ultimately did not. Sir Charles wrote: “The head of the infant C(hrist) is so placed under a palm tree that the tree seems part of it—This might be rectified by making the gilding of the nimbus a little more conspicuous—the hair might also be brought down an inch & half on the forehead & the top of the head reduced—the nimbus would then also require to be brought lower. The same defect (too much forehead & skull) is observable in the little St. John & might be rectified—his body is also a little too thick”. Eastlake’s comments reveal a common 19<sup>th</sup> century attitude wherein the “improvement” of paintings is regarded as entirely legitimate. It is unclear whether the painting was sold around that time or returned to the Oratory. At an unknown date, and for an undetermined period of time, the painting was exhibited in the Pinacoteca dell’Accademia di Belle Arti di Bologna, and included in the Pinacoteca’s 1876 catalogue: “Madonna and Child with Saint John signed ‘IVL.FL.F,’ provenance, Oratory of the Church of Santa Maria Galliera.” The painting had not appeared in previous catalogues nor was it present in subsequent ones. Based on the catalogue’s description of the signature, the reference in Otto Mundler’s travel diaries, as well as a reference by the nineteenth century art historian, Giovanni Battista Cavalcaselle, who in 1866 referred to the painting in the oratory of Santa Maria di Galliera as having the same subject as the version in Florence, it seems certain that the Allentown painting was in Bologna.

Although it is uncertain when it left Bologna, in the late 19<sup>th</sup> century it belonged to Charles Fairfax Murray (1849-1919), a pre-Raphaelite painter who had settled in Florence, becoming a well-known dealer. The Dictionary of Art Historians includes this description: “Fairfax Murray was a great influence in the art market, advising to numerous private and public collections in Europe and the United States. Lockett Agnew described him as ‘the finest judge of art in the world.’ Edward Hutton claimed that during the late nineteenth century, Renaissance treasures were so plentiful that Murray would park himself on a cafe bench, and, pounding the bench with a stick, shout, ‘Bring out your Madonnas! Two hundred lire!’” He gave most of his paintings to the Dulwich Museum. There may have been an unrecorded intermediate owner before Alessandro Contini Bonacossi sold it to Samuel H. Kress in 1931.



Detail of Bugiardini’s signature, in fine mordant gilding, on the Allentown painting.  
Photo credit: Allentown Art Museum, Samuel H. Kress Collection, 1961. (1960.10)

## Panel Preparation



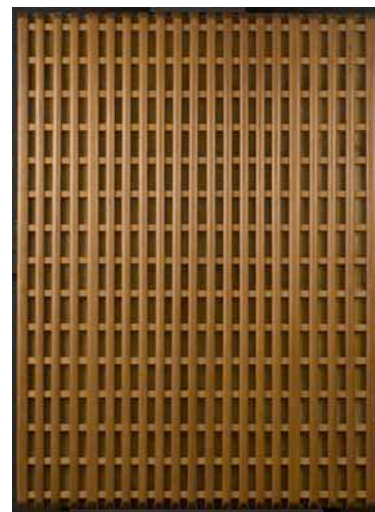
Detail of the Madonna's head and upper torso.  
 Giuliano Bugiardini, *Madonna and Child with Saint John the Baptist*, c. 1523-25  
 Allentown Art Museum, Pennsylvania  
 Samuel H. Kress Collection, 1961. (1960.10)  
 Photo credit: Allentown Art Museum, Samuel H. Kress Collection, 1961. (1960.10)



Giuliano Bugiardini, *Madonna and Child with Saint John the Baptist*, c. 1523-25  
 113 x 81.5cm, Oil on cradled panel  
 Allentown Art Museum, Pennsylvania  
 Samuel H. Kress Collection, 1961. (1960.10)  
 Photo credit: "Allentown Art Museum, Samuel H. Kress Collection, 1961. (1960.10)"



Detail x-radiograph of the Madonna's head and upper torso, 2010.



The 1932 cradle on the reverse of the panel.

The painting is on a wood panel support, possibly poplar, which was thinned and **cradled** by Stephen Pichetto in 1932, shortly after the painting entered the Kress collection. (The treatment record, "Samuel H. Kress Foundation Art Collection Data," is located in the object file at the Samuel H. Kress Foundation).

The preparation is characterized by vertical white lines, plainly visible in the recent **x-radiograph**, which occur randomly along the vertical grain of the wood. Areas of exposed wood on the reverse did not shed any light on the origin of these vertical lines. These same radio-opaque lines appear in an early **shadowgraph** taken by Alan Burroughs before the 1932 restoration, i.e., before the panel was thinned and the cradle applied, proving that they are not a

later, restorer's repair applied to the reverse, but represent an original artist's material applied to the front of the wood panel as part of the preparation. Prominent vertical cracks in the surface of the painting correspond with the outer edges of the anomalous striations.

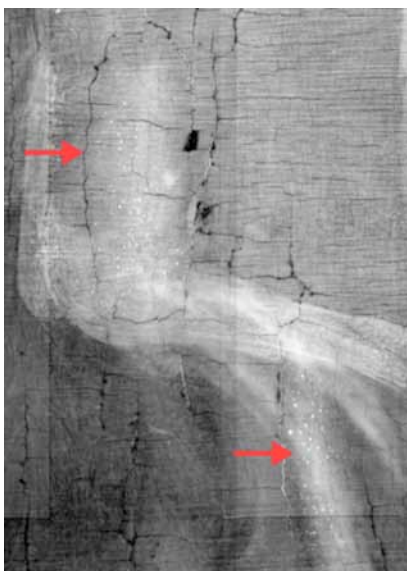


Detail shadowgraph of the Madonna's head and torso, taken before the cradle was applied to the reverse in 1932.

Although the materials used for the ground in the Allentown panel are fairly traditional, with **gesso** as the first layer, followed by a thin *imprimitura* of lead white, a commonly found preparation in this period, this does not explain the odd striations seen in the x-radiographs. The lead white *imprimitura* was rapidly applied in horizontal brushstrokes, and is clearly distinguishable from the vertical lines of the radio-opaque striations. There are several possible explanations. The panel may already have had wide cracks along the vertical grain that were filled with a lead based material before the application of the gesso. Alternatively, a previously prepared panel, with the gesso already cracked, may have been used, the cracks filled with a lead-containing material, and sanded prior to the application of the *imprimitura*.

The x-radiograph also reveals white dots in the areas associated with the striations, suggesting the presence of lead soaps. Dark spots in similar passages on the surface of the paint, may also represent lead soap aggregates that have migrated to the surface from the underlying lead-containing filling material.

This repair of faulty panels or grounds, done in the artist's studio, may be a fairly common practice.

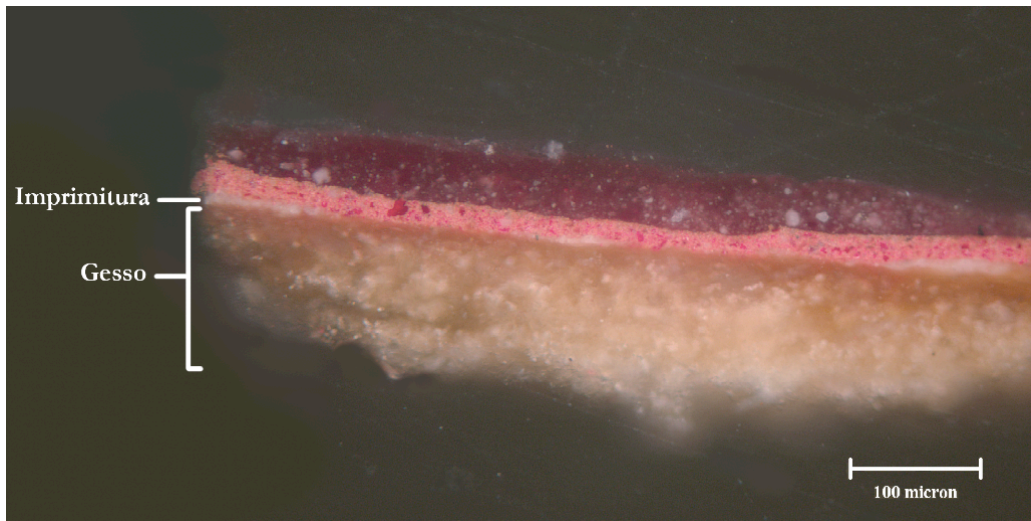


Digital x-ray detail of the Madonna's proper left shoulder reveals two radio-opaque vertical lines, denoted by red arrows. Associated cracking of the paint is seen corresponding to their outer edges. Additionally, bright white round dots seen scattered within the lines suggest the presence of lead soap formations.

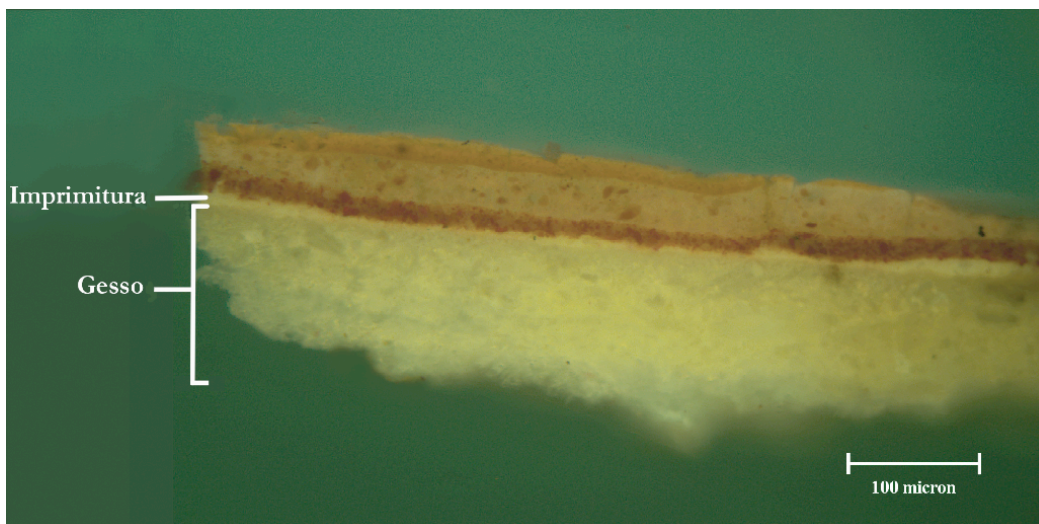


Photomicrograph of the Madonna's red robe shows an area of paint corresponding to one of the vertical radio-opaque white lines seen in the x-ray image. The dark spots represent areas where lead soap aggregates appear to have migrated from the underlying lead containing material.





Cross-section sampled from the Madonna's red robe, photographed under dark field illumination, shows the *imprimitura* and gesso layers.



Cross-section sampled from the Madonna's red robe, photographed under dark field illumination, shows the *imprimitura* and gesso layers.

## Underdrawing

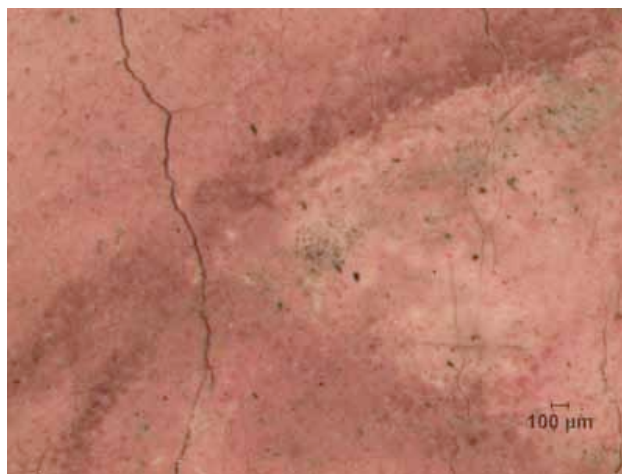


Infrared digital composite detail of the Madonna's torso, taken with an Indigo FLIR vis-InGaAs camera, using an astronomy "H" filter (1500-1800 nm.) Images captured and composited by John Delaney and Paola Ricciardi of the National Gallery of Art, Washington, D.C.

To further understand Bugiardini's working methods, the painting was examined with **infrared reflectography**, which revealed an extensive preparatory **underdrawing** for all three painted figures as well as the landscape and palm tree. Study of the drawn lines with both infrared reflectography and stereomicroscopic examination suggests the use of a dry, black-colored drawing medium, possibly charcoal, applied directly to the lead white *imprimitura*.



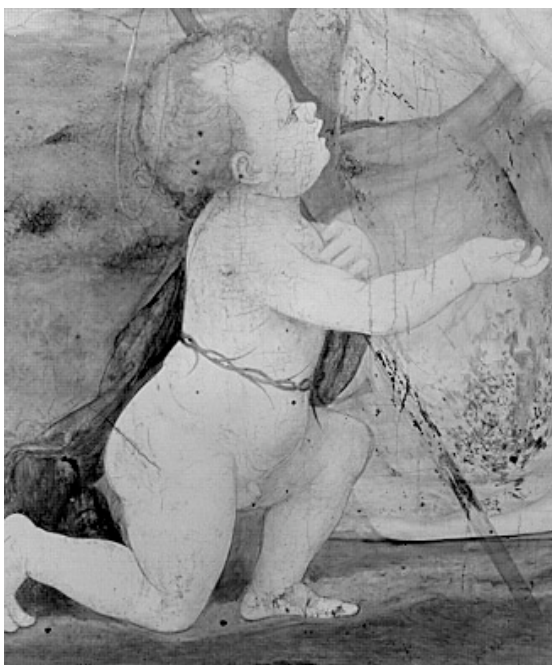
Detail of St. John's raised hand.



Photomicrograph of abrasion of the pink flesh-tone paint reveals the black colored drawn line of the contour of the base of St. John's thumb.



## Design Transfer



Detail Infrared digital composite of the Christ child figure captured with an InGaAs camera using an H filter and composited by John Delaney and Paola Ricciardi of the National Gallery of Art, Washington, D.C.



Detail Infrared digital composite of St. John captured with an InGaAs camera using an H filter and composited by John Delaney and Paola Ricciardi of the National Gallery of Art, Washington, D.C.

The nature and quality of the drawn lines suggests two different types of underdrawing, one that results from a design transfer, likely from a **cartoon**, and another that appears to be a freehand sketch. The even weight of the drawn lines and the schematic nature of the contours and details within forms, suggest that cartoons may have been used for the figures of both the children and for the Madonna's torso and arms. As the two Allentown children are identical in scale and pose to those in the earlier Florentine painting, it is likely that the same cartoon was used. This re-use of cartoons in the artist's workshop, as well as the sharing of cartoons between different artists and their studios, is common in Renaissance and early modern painting.



Detail of the Madonna's torso.  
*Madonna and Child with Saint John*, 1523-25  
Allentown Art Museum, Pennsylvania  
Samuel H. Kress Collection, 1961. (1960.10)  
Photo credit: Allentown Art Museum, Samuel H. Kress Collection, 1961. (1960.10)



Detail of the Madonna's torso.  
*Madonna and Child with Saint John the Baptist*, 1520  
Galleria dell' Accademia, Florence  
© Scala / Art Resource, NY

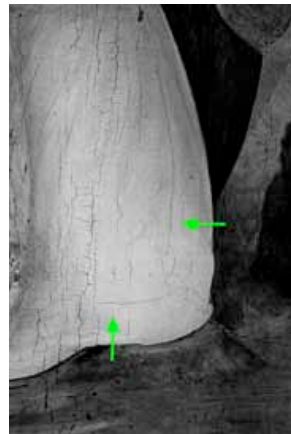


Infrared digital composite detail of the Madonna's torso with underdrawing lines mapped in red.

The underdrawing for the robe of the Allentown Madonna is different from the painted images of both the Allentown and Florentine versions, with a distinct style for the sleeve and placement of the mantle. The underdrawn mantle is similar to that in the Florentine painting, draping diagonally across her torso; however, unlike the Florentine painting, it wraps more tightly around the Madonna's waist. The Allentown Madonna's body is turned more toward the Christ Child, with her proper right shoulder positioned further to the right, her neckline higher, her extended proper right arm lowered, and her fingers raised. In the initial drawing her body was more foreshortened, with her knees placed much higher.



Detail of the Madonna's proper left knee.



Infrared digital composite detail of the Madonna's left proper knee. Underdrawing, denoted by the two green arrows, reveals an initial higher placement of the knee and smaller scale of the torso.

The nature of the underdrawing for the Allentown Madonna suggests the use of a cartoon. The similarities of the underdrawn image to the Florence painting imply that the same cartoons may have been used for both paintings; however, there are enough deviations to make us wonder whether the cartoon was originally made for another, earlier painting (either lost or never completed) and re-used for both the Florence and Allentown paintings, with changes made during the painting stages of both works. As many of Bugiardini's paintings incorporate elements from earlier works, especially in his large series of paintings depicting the Madonna, the Christ Child and St. John, Bugiardini must have kept and re-used cartoons in his studio, and appears to have brought some of them with him during his brief stay in Bologna. Infrared examination of the Florence painting would provide further insight to Bugiardini's use of cartoons.

## Drawing from Life



Detail infrared image of the Madonna's face showing an underdrawn line made to establish the placement of and proportion between the eyes.



Detail of the Madonna's head.  
*Madonna and Child with Saint John*, 1523-25  
Allentown Art Museum, Pennsylvania  
Samuel H. Kress Collection, 1961. (1960.10)



Giuliano Bugiardini, *The head of the virgin, eyes downcast*  
16<sup>th</sup> c., paper and chalk  
27.5 cm H x 20.5 cm W,  
Musée du Louvre, Paris  
© Reunion des Musée Nationaux / Art Resource, NY

A rare surviving sketch of a female head by Bugiardini, today in the collection of the Department of Graphic Arts at the Louvre, bears striking similarity to the Allentown Madonna. This highly finished drawing is larger in size than both the underdrawn and painted heads of the Allentown Madonna, and could thus not have served as a cartoon for the painting, but, rather, most likely functioned as a preparatory study. Due to Bugiardini's re-use of cartoons to transfer the design, facial features depicted in his multi-figural paintings often appear somewhat generic and conventional. The particular upward slant of the eyes and the expression of serene contemplation seen both in the preparatory drawing in the Louvre and the Allentown painting, appear more specific and akin to a portrait, perhaps drawn from a live model. Although Bugiardini often borrowed figures to compose his paintings, Giorgio Vasari's brief description of the artist's stay in Bologna supports such studio practice: "...having been drawn to Bologna by certain friends, he executed some portraits from life, and, for a chapel in the new choir of S. Francesco, an altar-piece in oils containing Our Lady and two Saints, which was held at that time in Bologna, from there not being many masters there, to be a good work and worthy of praise."



## Artist's changes



Digital infrared composite detail of the Madonna's torso with a mapping of underdrawn lines (red) and early lay-in of paint for the mantle and finger positioning (blue).

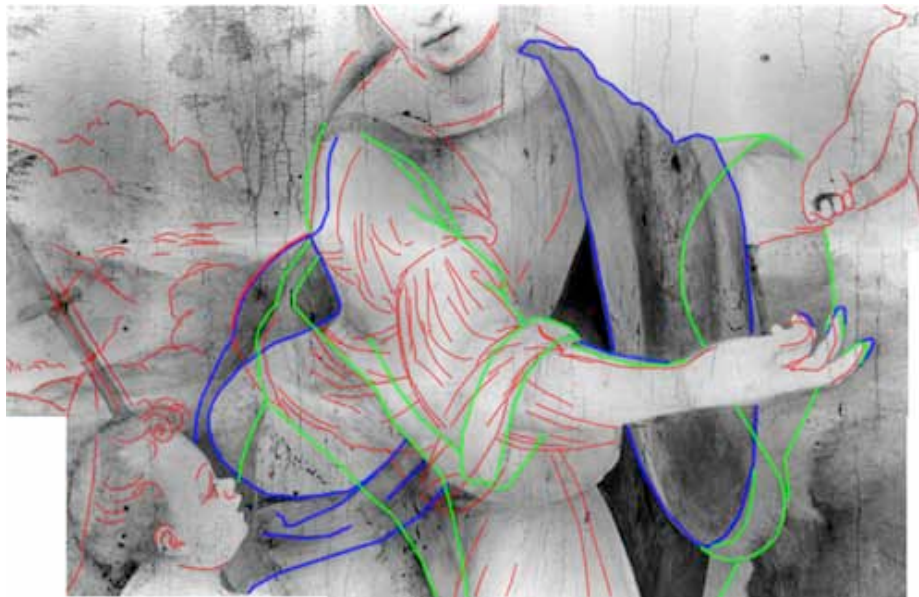


Detail of the Madonna's torso.



Detail of the Madonna's torso photographed in specular light reveals the texture of the early painting of the blue mantle, most noticeable in the area to the upper right of St. John's head.

Examination with infrared reflectography reveals that Bugiardini changed his mind several times while painting. In particular, he radically rethought the Madonna's pose and positioning of her mantle. Unlike the underdrawn mantle which draped across her chest and wrapped tightly around her waist-line, when the artist began painting the blue mantle he referred back to the Florentine painting, with its loose drape falling across the Madonna's lap, wrapping around her back, and looping over her proper left shoulder. However, this idea was abandoned in later stages of painting and was painted over with changes and adjustments that can be seen in the final image.



Digital infrared composite detail of the Madonna's torso with a mapping of the underdrawn lines (red,) the early lay-in of paint for the mantle and finger positioning (blue) and the final changes seen in the painting (green).

In the completed painting, the mantle no longer falls across the Madonna's waist but rather covers her entire proper right side, from just below the waist, tightly encircling her body. While the mantle still continues to drape back over her proper left shoulder, additional painted folds and fabric were added to cover part of her proper left arm, creating a greater sense of movement and better balance to the composition. Additionally, in a later stage of painting, the Madonna's posture was shifted, leaning less toward the Christ Child, as evidenced by a ***pentimento*** of the landscape which extends underneath the red paint of the Madonna's proper right shoulder. Unlike the Florence painting with the Madonna's red sleeve pushed up to her elbow, the sleeve in the Allentown painting extends below her elbow, emphasizing the downward direction of her gaze and establishing a central focal point between the two children. Although the Madonna's head was painted slightly larger than the underdrawn head, she was always conceived with her head tilted downward as no changes were made to the Madonna's face or to the angle of her head. With her downward gaze and the shift in her posture, the Virgin more effectively interacts with both children, reinforcing her symbolism as mediatrix between her Son and mankind. The changes made during the painting stages ultimately shift the painting away from the Accademia version and towards a Raphaelesque model.



Detail of the Madonna's proper right shoulder. The white arrows point to the pentimento of the landscape that extends underneath the red robe.



Detail shadowgraph of the Madonna's proper right shoulder. The more radio opaque paint of the landscape and sky is seen underneath part of the less radio opaque painted of the red robe.

### Painting Technique:

#### Sky

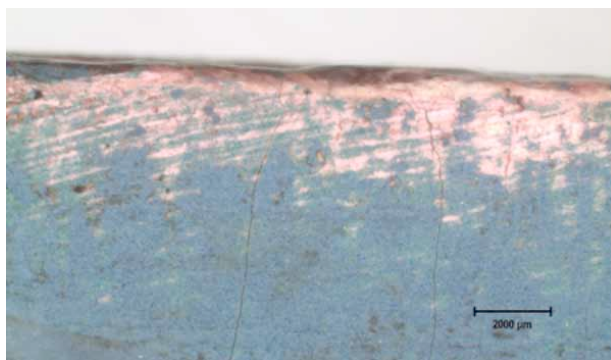


Detail of the upper left sky.

After the underdrawing was applied on top of the upper lead white *imprimitura*, the painting of the sky was begun, before the execution of the figures. The sky was built up in multiple layers, starting with an application of bright pink oil paint applied overall to the area of the sky and worked around a reserve left for the Madonna's figure. This lay-in of pink paint was thickly applied in horizontal brush strokes, imparting a strong texture left visible in the final painted image. The area of the sky was further built up with subsequent thin applications of more dilute light blue oil paint layers, the lowermost likely containing azurite and the uppermost likely containing ultramarine. The pink underlayer, combined with additional later touches of pink in the clouds and the horizon line creates an overall warm glow contrasting with the cooler blue paint of the sky.



X-radiograph detail of the sky to the left of the Madonna's face shows the horizontal application of the radio opaque lead white containing pink underlayer. Brush strokes can be seen worked up to the edge of a reserve left for the later painting of the Madonna's head and chest.



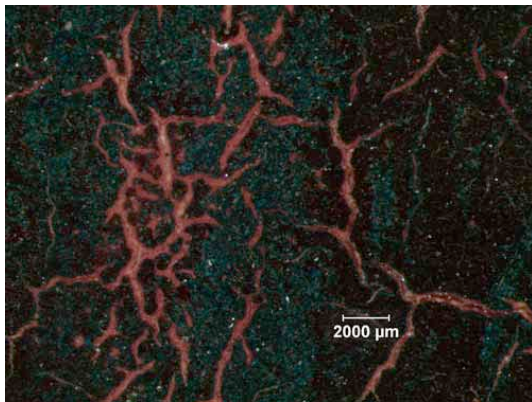
Photomicrograph of the top left edge of the sky reveals the textured pink layer beneath the blue sky.



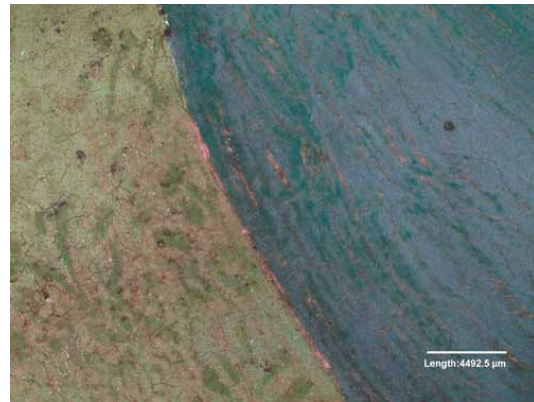
## Painting Technique:

### Layering of Blues

The particular balance and contrast of warm and cool colors seen throughout the painting appears to be an effect the artist strove for from the inception of the painting process, as evidenced by the particular paint layering system. As is seen in the layering of the light blue sky, an underlying warmth is also echoed in the Madonna's blue mantle which was entirely underpainted with a bright red paint layer. This particular layering structure is not a result of the artist's changes made during the painting process as the red underpaint is present under the areas of the blue mantle that do not extend over the earlier or final painted versions of the Madonna's red robe. Stereomicroscopic examination of the wide **drying cracks** present throughout the blue mantle, especially in the darker blue shadows, reveal the underlying red paint.



Photomicrograph of drying cracks in the blue paint of the mantle reveal the red underpaint.



Photomicrograph of the proper right edge of the blue mantle. The red underlayer is visible along the edge of the robe and within the interstices of cracks.

A **cross-section** sampled from the lighter blue outer lining of the mantle shows its paint stratigraphy, with the red paint underlayer, comprising a mixture of vermilion and red lake pigments, applied on top of the lead white upper ground layer. A thick, medium-rich, blue paint layer containing azurite and lead white pigment particles was painted on top of the red layer, followed by a thin lighter blue paint layer containing ultramarine and lead white pigments. The pinkish fluorescence of the uppermost blue layer, seen under **ultra violet light**, suggests the presence of a lake pigment. The lack of a defined interface between the underlying red layer and the blue azurite containing layer above it suggests that the red layer was still somewhat wet when paint was applied over it. This, combined with the fact that the upper-lying azurite containing layer was particularly rich in medium, likely attributes to the wide drying craquelure.



Photomicrograph of the cross-section sample site of the outer lining of the blue mantle.



Cross-section sampled from the outer lining of the Madonna's blue mantle, viewed under dark field illumination. Sample does not include the lowermost gesso layer.



Cross-section sampled from the outer lining of the Madonna's blue mantle, viewed under ultra violet illumination. Sample does not include the lowermost gesso layer.

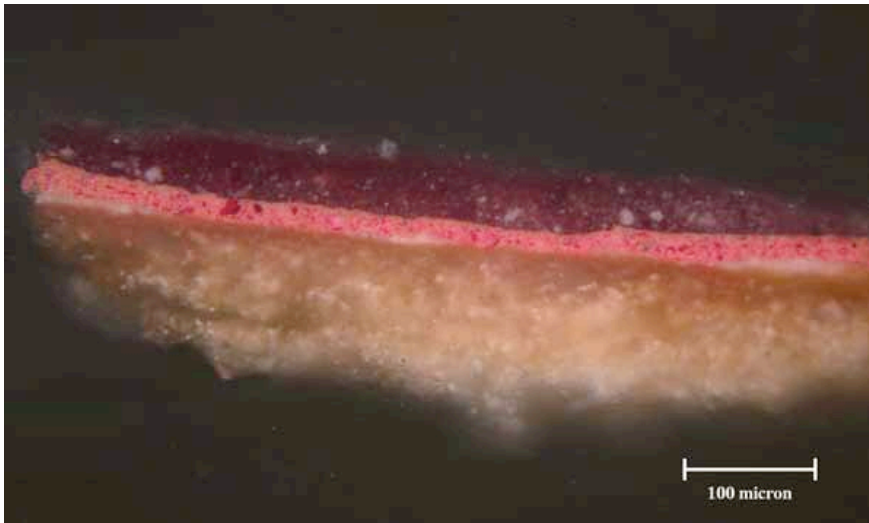
## Painting Technique:

### Madonna's red robe

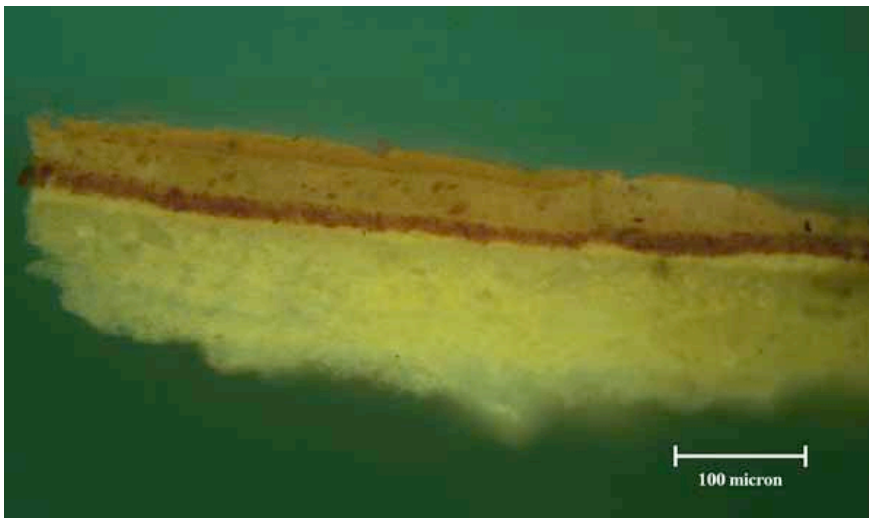


Detail of the Madonna's red robe.

A cross-section sampled from a shadow of the Madonna's red robe reveals an initial lay in of bright red paint containing vermilion and translucent red particles, similar to the layer found under the blue paint of the mantle. A slightly cooler-toned, very resinous pink layer containing translucent red and lead white pigment particles was **scumbled** on top of the initial bright red layer, followed by a deep red translucent glaze. Examination of the cross-section under ultraviolet light reveals a bright pink fluorescence in the uppermost layer, and to a lesser degree in the underlying layer as well, which is often characteristic of lake pigments. Unlike the cross-section of the blue mantle, there is a defined interface between the initial red paint layer and the upper resinous pink layer, suggesting that more time had passed before the red layer was painted over.



Cross-section sampled from the Madonna's red robe, photographed under dark field illumination.



Cross-section sampled from the Madonna's red robe, photographed under ultra violet illumination.



## Pigment Analysis



Mapping of FORS analysis sites.

Fiber Optics Reflectance Spectroscopy (FORS), a non-destructive technique used for pigment identification, was carried out with an FS3 fiber optics spectroradiometer (ASD, Inc.) in the range 350-2500nm by John Delaney and Paola Ricciardi of the National Gallery of Art, Washington, D.C.

Pigments identified are as follows:

Area of Painting Analyzed	Analysis Sites	Pigments Identified by FORS
Red robe	12	Red Lake, lead white
Lighter Blue of mantle	1, 2, 3	Lapis lazuli, azurite, lead white
Darker Blue of Mantle	0, 4, 5, 6	Lapis lazuli and azurite
Blue sky	17	Lapis lazuli, lead white
Purple sleeve	7, 8	Red lake, lapis lazuli, lead white
Clouds	15, 16, 18, 20, 21	Lead white, lapis lazuli, red lake
Flesh tones	24	Lead white, iron oxide pigments (earths and/or ochres,) vermillion
Virgin's hair	22	Lead white, iron oxide pigments (earths and/or ochres)
Background blue mountain	10	Azurite, lead white, possibly lapis lazuli
Green of landscape	9	Copper green, azurite
Palm Tree	14, 19	Copper green, lead white
Rock in right foreground	23	Iron oxide pigments (earths and/or ochre's)
Lower ground layer		Gypsum was identified in most sites analyzed with bands at about 1447, 1493, 1540, 1944, and 2217nm

## Treatment



*Madonna and Child with Saint John the Baptist*, c. 1523-25  
113 x 81.5cm, Oil on cradled panel  
Allentown Art Museum, Pennsylvania,  
Samuel H. Kress Collection, 1961. (1960.10)



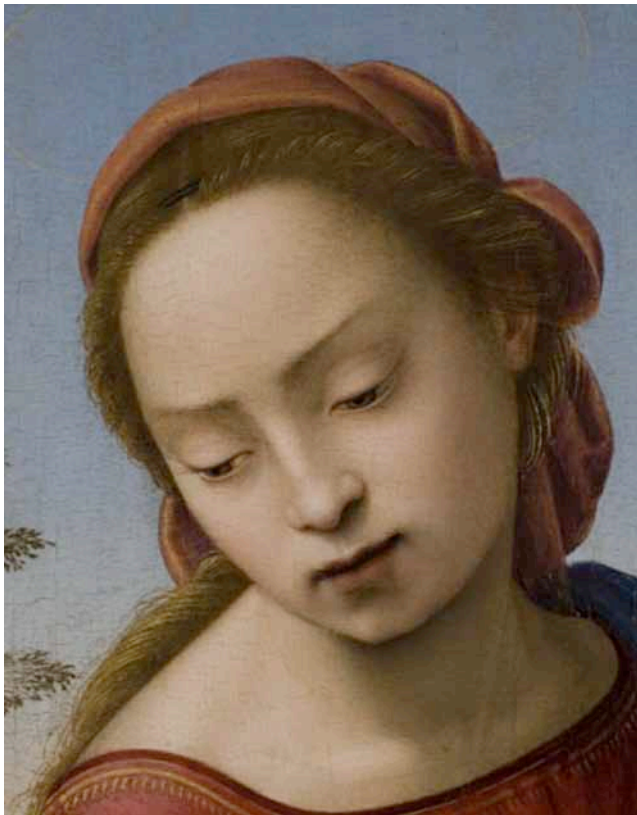
*Madonna and Child with Saint John the Baptist*, c. 1523-25  
113 x 81.5cm, Oil on cradled panel  
Allentown Art Museum, Pennsylvania,  
Samuel H. Kress Collection, 1961. (1960.10)

When the painting was brought to the Conservation Center, the varnish was extremely discolored, and some of the old retouches from past restoration had blached, especially those in the sky. The discoloration of the varnish was particularly disfiguring as it imparted an overall yellow tonality to the image, most noticeable in the blue sky. After thorough examination of the painting and spot testing of the varnish and paint layers, cleaning of the painting was carried out. With the careful removal of the varnish layers, the juxtaposition and balance of cool and warm hues was restored, seen, for example, in the contrast between the bright blue sky and the warm pinkish glow of the horizon. Additionally, the pinkish red of the Madonna's robe is now offset by the bright green of the middle ground landscape, more effectively situating the figure in the foreground and creating a greater depth of the landscape.



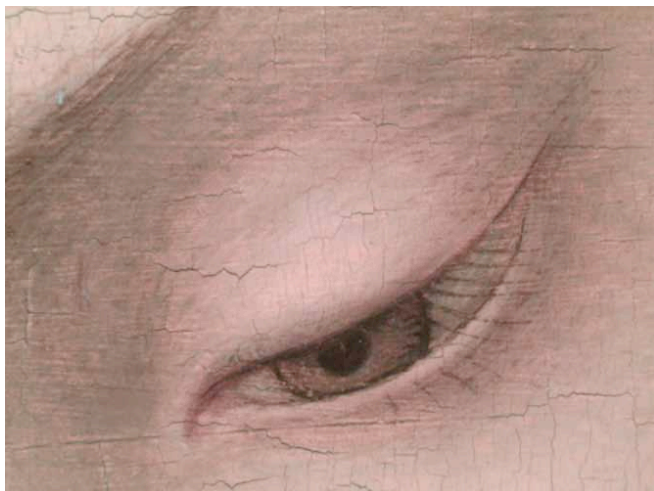
Detail of the Madonna and Christ child photographed during cleaning.

The artist's brushwork and paint handling are also more evident after the cleaning, revealing the artist's technique of contrasting paint textures. This is beautifully displayed in the Madonna's flesh tones, which were underpainted with a warm pink textured paint, on top of which cooler highlights and shadows were thinly **scumbled** with a more dilute paint. The pink paint was applied rapidly with textured brush strokes while the upperlying fleshtone layers were more delicately applied, with a more fluid consistency.

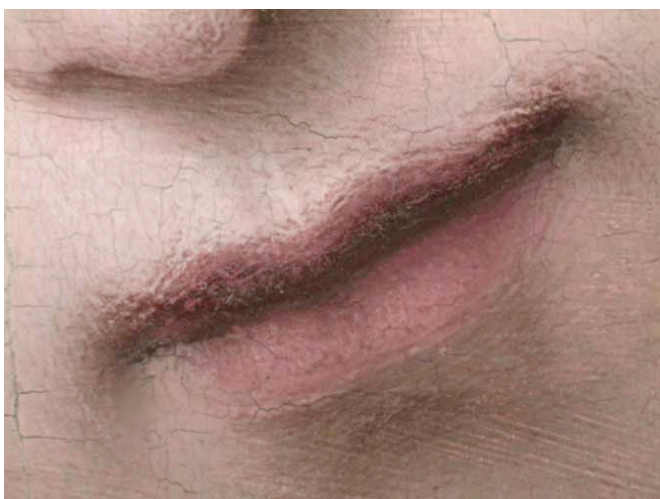


Detail of the Madonna's head, after treatment.





The texture and warm glow of the underlying pink layer can be seen in this detail of the Madonna's proper left eye.



Detail of the Madonna's mouth showing the fluid, more dilute consistency of the thin upper flesh layers. The texture of the underlying pink layer can also be seen below her mouth.

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Laura Pagnotta, "Due dipinti e un disegno di Giuliano Bugiardini", *Antichità Viva, Rassegna d'Arte*, 31, no. 2, March-April 1992, 14.

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<http://www.nyu.edu/gsas/dept/fineart/conservation/kress/bugiardini/intro.htm>