

A Multidisciplinary Study of the Tongerlo *Last Supper* and its attribution to Leonardo da Vinci's Second Milanese studio

*Jean-Pierre Isbouts, Fielding Graduate University, Santa Barbara, CA, and Christopher Brown,
Brown Discoveries, LLC, North Carolina*

This article presents the findings from a two-year study of the *Last Supper* canvas in the Abbey of Tongerlo, Belgium, including a detailed review of its provenance as well as a digital analysis and multispectral study conducted by the Belgian company IMEC in the Spring of 2019. The design of the study is a composite multidisciplinary approach, with traditional connoisseurship and literary research being augmented by scientific examination, using new digital processing and multispectral imaging techniques. The article argues that based on the available evidence, the Tongerlo *Last Supper* was produced in Leonardo's Milanese workshop between 1507 and 1509, as a collaborative project involving the *Leonardeschi* Giampietrino, Andrea Solario and Marco d'Oggiono under Leonardo's supervision. Furthermore, the infrared spectography scans suggest that the face of John in the painting may have been painted by Leonardo himself. The study was funded by IMEC Belgium; Fielding Graduate University of Santa Barbara, CA; Brown Discoveries, LLC of North Carolina, and conducted with the gracious permission of the Premonstratensian Abbey of Tongerlo, Belgium.

Key words: Leonardo da Vinci (1452-1519); Last Supper; Technical Art History; Multispectral Imaging; the art of the Leonardeschi.



Fig. 1. Studio of Leonardo da Vinci, *Last Supper* (after Leonardo), known as the Tongerlo copy, 1507-1509.

Introduction

For the last 450 years, the Tongerlo canvas of the *Last Supper* has been quietly occupying a wall in a chapel on the grounds of the Premonstratensian Abbey of Tongerlo near Westerlo, about an hour's drive from the Belgian city of Antwerp. Its relatively remote location many explain while up to this time, the work has largely escaped serious scholarly attention. In his extensive 2001 monograph *Leonardo's Incessant Last Supper*, which analyzes some fifty 16th century copies of the *Last Supper*, Leo Steinberg only devotes a single page to the work, arguing that "there is no further reason to date the Tongerlo copy in Leonardo's lifetime." However, in the following paragraph, the author admits that this work, together with the Certosa copy at London's Royal Academy of Arts, "are now said to be our most accurate copies." In sum, Steinberg concludes, "given its size, its high quality, and general accuracy, the Tongerlo copy ranks with the finest surviving testimonies to the near-lost Leonardo (original)."¹

This highly ambivalent judgment is typical for the way modern critics have approached the Tongerlo painting. While very few historians have actually seen the work and praised its remarkable quality, none have dared to associate its verisimilitude with Leonardo's Milanese workshop. The reason, we believe, is that the work is not on display in a major public museum, where it would inevitably have been subjected to intense curatorial inquiry.

Furthermore, Leonardo da Vinci is today, 500 years after his passing, at the zenith of his fame. A painting entitled *Salvator Mundi*, which may have begun as a Leonardo autograph but then suffered from intense overpainting and restoration, made headlines when it sold in 2017 for \$450 billion at auction—the highest sum ever paid for a work of art. As a result, hardly a month goes by without someone announcing an "undiscovered da Vinci" in the public press. This has made art professionals understandably reluctant to make any attributions involving the great master, for fear of being exposed to ridicule.

In the case of the Tongerlo *Last Supper*, however, the evidence for an attribution to Leonardo's second Milanese workshop is compelling. The work is executed in oil on canvas, and sized 418 by 794 cm, which closely matches the scale of the original mural. Unlike most other copies of Leonardo's *Last Supper*, its documented provenance reaches back to 1545, when it came in the possession of the abbey, and has been there ever since (except for periods of evacuation during times of war). What's more, in this article we will provide credible evidence that suggests that the work was the result of a French royal commission during the second half of

the 1500's, which would undoubtedly have compelled Leonardo to personally supervise the work.

The Original *Cenacolo*

The history of Leonardo's original mural of the *Last Supper* is well-known. Around 1495, the artist was commissioned by Ludovico Sforza, the duke of Milan, and/or the abbot of the Dominican convent of Santa Maria delle Grazie, to execute a *Last Supper* in the newly built refectory of the monastery complex. As a depiction of the last meal shared by Christ with his Apostles, it was an appropriate motif for a hall where the friars intended to take their meals. The commissioned work was to cover the entire north wall, measuring 460 by 880 cm (180 by 350 in).

At the time, there was ample precedent for decorating a refectory with this sacred theme. In Florence, both Andrea del Castagno and Domenico Ghirlandaio had painted a *Last Supper* in the refectory of their monastic patrons, following the established program of traditional Christian iconography: a *Last Supper* on one side, marking the institution of the Eucharist; and a *Crucifixion* on the other, illustrating the redemption of humankind through Christ's sacrifice on the cross. Of these two, the *Crucifixion* was seen as the "principal" work, depicting Christianity's most sacred moment and therefore usually oriented to the east, whereas the *Last Supper* was the companion piece, painted on the opposite wall. The same arrangement was commissioned in Milan: whereas Leonardo was charged with painting a *Last Supper*, it was one of Sforza's favored artists, Giovanni Donato da Montorfano, who was given the quintessential task of depicting the *Crucifixion*.

While it is often forgotten in the art historical literature, the most important ducal endeavor in Milan at that time was not the refectory nor the Santa Maria delle Grazie itself (even though it had been designated as the pantheon of the Sforza dynasty), but several other prominent projects, including the construction of Milan's massive Gothic cathedral. Until the advent of Sforza rule in the mid-15th century, work on the cathedral had been stagnating, largely because funding had lagged during the rule of Gian Galeazzo Visconti, and because the edifice was conceived in the Gothic *rayonnant* style inspired by French and German models. Since North European Gothic had never struck roots in Italy, this required the massive import of

French and German architects, artists, masons, and glaziers who alone possessed the knowledge to build such a cathedral.

Visconti's successor, Francesco Sforza, revived the cathedral project and ensured that by mid-century, both the nave and the aisles had been completed up to the sixth bay. His son Ludovico, anxious to cement the Sforza claim on the Duchy, continued to support the ongoing construction soon after seizing power. While much of this activity was placed in the hands of foreign-born masons and engineers, the decoration of the church was a uniquely Lombard affair, so that several generations of Milanese families worked on the cathedral for much of their lives. One of these was the Lombard Montorfano family, beginning with Paolino da Montorfano (1402-30). Three generations followed him in this trade, including Giovanni Donato di Montorfano (c. 1460–c. 1503), who also worked in the Milan church of San Pietro in Gessate as well as the Santa Maria delle Grazie. Thus, by 1495 Montorfano had established himself as an artist who was experienced in fresco, who delivered his work on time, and whose art was entirely in line with the prevailing Lombard tradition. This explains why Montorfano was commissioned to create the principal work, a monumental *Crucifixion* on the south wall of the refectory, at the same time that Leonardo was charged to paint a *Last Supper* on the north wall.

Ross King has speculated that the Dominican prior contracted simultaneously with both Montorfano and Leonardo because the former could be relied upon to deliver his work promptly—in contrast to Leonardo, who as everyone knew by then, either took too long or left things unfinished.² Perhaps the abbot thought that the shining example of an artist who did as he was told would shame the Florentine into a more pliable attitude.

As it was, Montorfano produced a *Crucifixion* that was entirely in line with Lombard convention, deeply imbued with the International Gothic style, albeit tempered by a somewhat casual concern for linear perspective. The artist was evidently pleased with his work, not in the least because he appeared to have executed the work in record time. At the foot of the cross, he proudly added a painted inscription that proclaims: GIO. DONATUS MONTORFANUS, with the year 1495, meaning that artist finished the work in less than a year. The same, however, could not be said about the artist laboring on the opposite wall—much to the chagrin of the duke, whose relationship with Leonardo had rarely been a happy one. Exasperated, the duke wrote to his court marshal, Marchesino Stanga, on June 29, 1497, instructing him to ask Leonardo why he has still

not finished his “principal work in the refectory of the delle Grazie (sic)” —meaning, the *Last Supper*.³



Fig. 2. A digital reconstruction of the *Cenacolo* or refectory of the Santa Maria delle Grazie as it appeared in the early 16th century (Courtesy, Pantheon Studios).

Of course, today we know why Leonardo took several years to complete his mural. His art was always informed by his empirical study of light and atmospheric effects, as well as his observations of both of nature and human psychology. What's more, Leonardo had decided to break with the traditional iconography of the *Last Supper*, established during the Byzantine era and further refined by Quattrocento artists such as del Castagno and Ghirlandaio. According to this convention, twelve Apostles are grouped around a rectangular table, set with bread and wine, with Jesus at their center. Two of these disciples stand out. One is Judas, the disciple who plots to betray Jesus, who is usually identified by wearing a garment of a different color (such as brown or black), or by being isolated from the rest. The other is the Apostle John, described in

the Gospel of John as Jesus' "beloved," and therefore placed next to Jesus; their affection for each other is illustrated by John reclining on Jesus' shoulder or lap.

Leonardo was undoubtedly familiar with the fresco that Domenico Ghirlandaio painted in the Church of Ognissanti in Florence around 1480, some two years before his departure for Milan. Its most important feature is the artist's exploitation of the structural features of the wall as an integral part of the composition. Thus, the two flat arches supporting the groined vault are repeated in the *painted* space beyond the room—an idea that in the Baroque period would become common as a *trompe l'oeil* or "deceive the eye" effect. Ghirlandaio's fine solution is further made plausible by the addition of a corner table at each end, which further encourages the eye to interpret the scene as a three-dimensional space.



Fig 3. Domenico Ghirlandaio, *Last Supper*, 1480. Church of *Ognissanti*, Florence.

But in all other aspects, Ghirlandaio was careful to follow traditional precedent. Judas is separated from the rest of the Apostles by sitting *in front* of the table. John, the beloved disciple, is asleep, leaning close to the bosom of Christ. The other Apostles are cast in various poses of contemplation. That is because *Last Supper* paintings were meant to depict the moment when Jesus breaks bread and blesses his cup, saying, "This is my blood of the covenant, which is poured out for many. Do this in memory of me" (Mark 14:23-24). The problem with this concept

is that it gives the Apostles very little to do, which is why most *Last Supper* scenes are rather static—if not to say, rather dull.

Leonardo rejected that monotony. He had faced a similar challenge, the creation of a complex and immersive narrative, with his design for the *Adoration of the Magi* in Florence, which likewise was governed by established iconography. In the case of the *Last Supper*, Leonardo's solution was to ignore the traditional narrative, and instead depict an entirely different subject in John's Gospel: the moment when Jesus announces that one of the twelve Apostles will betray him. This allowed him to exploit the emotional shock of Jesus' declaration: how it explodes outwards from the center and provokes the men around Christ into indignant denials and debate. This is already evident in a study dated to 1495 (which was split over two levels because of the limitations of the sheet). In the figure below, we have taken both parts and aligned them to illustrate the radical change that Leonardo was bringing to the motif.



Fig. 4. Reconstruction of the *Study for the Last Supper*, ca. 1495.

Leonardo's notebooks of this time are filled with all sorts of ideas of how to express the dismay of the Apostles by virtue of their gestures and facial expressions—"the motions of the mind", as he called it:

"Emotions move the face of man in different ways, for as one laughs, another weeps; as one is cheerful, another turns sad; others show anger and pity, while others still are amazed, afraid, distracted, thoughtful or reflective. The hands and indeed the whole person

should follow the expression of the face.”⁴

To manage this large ensemble of figures, Leonardo first organized them in four individual groupings of three each; and within those groups, he then used the full force of his creative vocabulary to express individual motives through mime and gesture. Shock, disbelief, indignation, fear, sadness, submission – all of these sentiments are performed right in front of us, as if we were witnessing a play on stage with live actors.

To depict a *Last Supper* in this manner was a magnificent idea, but the essential problem remained that such a range of emotional expressions could never be conveyed in quick-drying tempera paint, the standard process for painting murals. On top of that, Leonardo had little experience in painting large frescoes. All of his portraits executed in Milan were painted on a modest scale, and in oils, for oils are patient. They allowed him to work slowly and deliberately, using each new glaze to add another layer of light and shadow, of *relievo* and *chiaroscuro*, until the portrait became the reflection of real, living flesh.

In response, Leonardo embarked on an experiment: to try to create a new process that would enable him to use the same effects of his oil technique, while still producing a strong bond between pigment and plaster. Instead of using wet plaster *al fresco*, he prepared a dry wall surface, using a seal of pitch and *gesso* (a binding agent consisting of chalk, gypsum, and lead white pigment). He then applied a thick layer of egg tempera. The idea was to create a surface that would patiently tolerate multiple layering in the same way that a wood panel does. But the attempt failed; the pigments refused to bind with the surface and, as early as 1517, the painting began to flake. Part of the reason is that the northern wall faced the kitchen, and therefore absorbed a lot of condensation.

As a result, we only have a very imperfect glimpse of what the ultimate work may have looked like. By the judgment of its most recent restorer, Pina Brambilla, only some 20% of the original fresco is still visible. Therefore, the quest for an extant copy that is faithful to Leonardo's original vision is quite urgent. It is only by virtue of such a copy that we can truly judge what is undoubtedly the seminal work of the High Renaissance. But does such a copy exist? More specifically, of the three existing copies that were executed during Leonardo's lifetime by his followers, which version comes closest to the original?

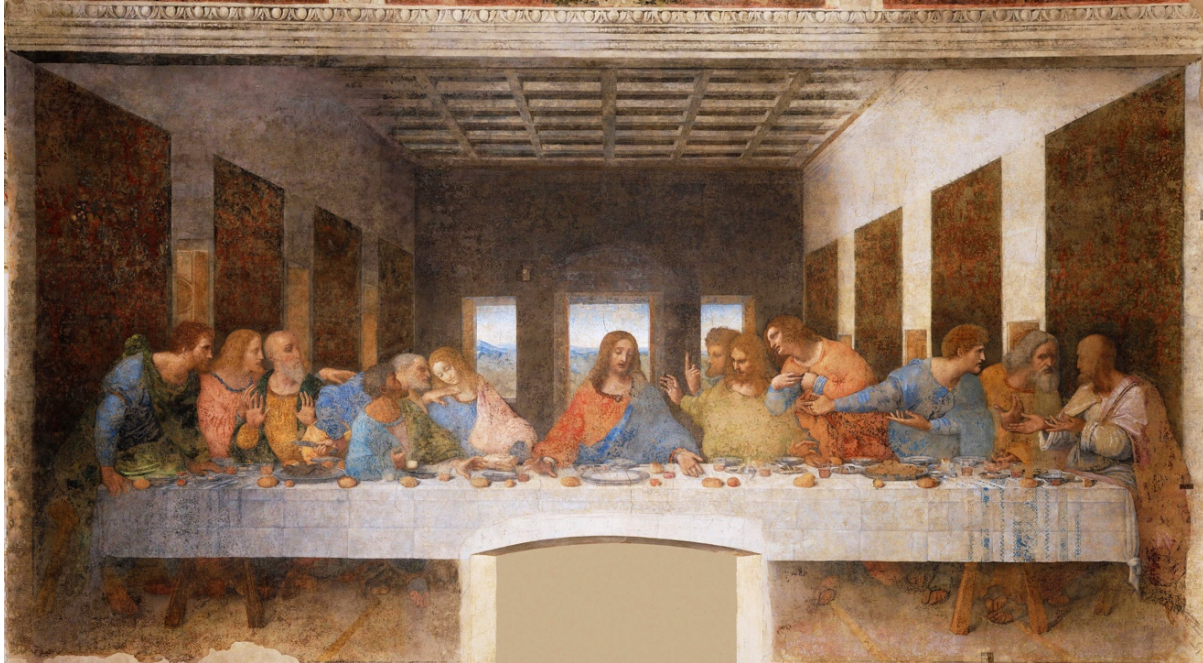


Fig. 5. Leonardo da Vinci, *The Last Supper*, 1494-1499. Santa Maria delle Grazie, Milan.

A King Arrives in Milan

The starting point for our inquiry is an anecdote described in the book *Lives of the Artists* by Giorgio Vasari, commonly regarded as the first work of art history, originally published in Florence in 1550.⁵ Vasari's comment is framed by a traumatic event in the history of Milan: its conquest by the French King Louis XII. Like his predecessor, Charles VIII, Louis believed he had a legitimate claim on Milan and proceeded to act on it as soon as he was crowned king in 1498. Soon after he invested the city, the king decided to see the much-admired fresco of the *Last Supper* for himself. When he saw it, he was so impressed that he ordered his engineers to "carry it into his kingdom... safely, and without any regards for expense."⁶ When his engineers said this couldn't be done, the king "tried by any possible means to discover whether there were architects who, with cross-stays of wood and iron, might have been able to make it so secure that it might be transported safely; but the fact that it was painted on a wall robbed his Majesty of his desire, and so the picture remained with the Milanese."

King Louis had good reasons to want the painting in France. Though it is difficult to imagine today, early 16th century France—and particularly the royal court at Amboise—had become a cultural backwater. France had experienced its greatest artistic flowering during the 14th and early 15th century, when the court of Burgundy was a leading center of the High Gothic

style with painters such as Jean Fouquet, Enguerrand Quarton and the Limbourg Brothers. But the sudden onset of the Florentine Renaissance, which took Europe by storm in the latter part of the 15th century, combined with the devastating effects of the Black Plague and the Thirty Years War, had toppled France from its artistic pedestal.

This is where Vasari's anecdote ends, but it left an important question: what did the king do next? Did he accept the verdict of his engineers and abandon the idea? Or did he do what most autocratic rulers did in the Renaissance: refuse to take "no" for an answer, and search for an alternate solution?

As it happened, the late 15th century had seen the development of a new form of support for paintings, as an alternative to a wall or a wood panel. That medium was canvas. Originally introduced in Northern Europe, canvas was then adopted by Venetian painters for the obvious reason that Venice was the leading shipbuilding center of Europe, and that therefore canvas—used to make sails—was in ample supply. Canvas had many advantages over wood panels. It was less expensive; it didn't split or crack as oak or walnut panels sometimes did; it would allow for any number of sizes; and most importantly, it could be rolled up and easily transported over long distances. As it happened, Leonardo had witnessed the use of canvas in the studio of Venetian artists during his stay in the lagoon city in either 1499 or early 1500, after the French investment of the duchy of Milan.

We therefore developed the hypothesis that the French king may have opted for another way to satisfy his desire: to commission Leonardo to produce a faithful copy of the *Last Supper* fresco on canvas, to scale, so that it could be brought back to France. The evidence for such a claim is compelling. We know that Ludovico Sforza fled Milan on September 2, 1499, and that after the French forces captured the city, Louis made a triumphant entry into Milan on October 6 of that year. At that time, the king appointed a man named Georges d'Amboise to serve as the governor of Milan. D'Amboise was a French cardinal whose family had served in several prominent positions in the previous government of King Charles VIII.⁷

King Louis' patronage of Leonardo must have begun very soon after that date. Leonardo's painting of the *Madonna of the Yarnwinder*, begun around 1500, was commissioned by Florimond Robertet, a senior advisor to Louis XII who undoubtedly acted on the king's instructions. This suggests that Robertet probably charged Leonardo with the *Yarnwinder* project

while the artist was still in Milan, and that Leonardo then completed the painting after his subsequent return to Florence.

In the meantime, Leonardo's partner in Milan, Ambrogio de Predis, continued to labor on the second version of the *Virgin of the Rocks* (now in the National Gallery in London) that he and Leonardo had previously collaborated on. But when the Confraternity of the Immaculate Conception refused to pay, de Predis lodged an official complaint with the Milanese government in 1502, which at this time happened to be ruled by France. In practice, it was probably Charles d'Amboise, Georges's nephew who had succeeded his uncle as governor of the city, who received the petition. The new French government duly ordered a judicial hearing on the case, but the Confraternity had considerable political sway in Milan, and as it happened, Leonardo himself was now in Florence. Perhaps as a result, the judge's ruling went against the artists and sided with the Confraternity, which claimed that the painting was still "unfinished." Translated properly, this meant that the Confraternity believed the painting was more Ambrogio than Leonardo; the magic touch of the *real* master, or so it was felt, was clearly missing. As a result, Leonardo had to return to Milan and do whatever it took to see the client satisfied, and get himself and his partner paid.

Consequently, by 1506 Leonardo was getting ready to return to Milan once more, even though he was under contract to paint a massive fresco, the *Battle of Anghiari*, in the Great Council Hall of the Palazzo della Signoria (today called the Palazzo Vecchio), the seat of the Florentine government. And that project was not going very well. Leonardo had once again been experimenting with various pigments that would allow him to create the optical effects of oils on a plaster wall. Much against its better judgment, Florence grudgingly issued Leonardo an exit permit on May 30, 1506, with the understanding that the furlough would not exceed three months, and that Leonardo would have to leave a deposit of 150 florins to guarantee his return to Florence.

But as we know, that is not what happened. At the end of the agreed three-month period, d'Amboise wrote a courteous letter to the president of the Signoria, the *gonfaloniere* Soderini, asking for an extension of Leonardo's furlough until September. Soderini replied with a thunderous volley on October 9, all but accusing Leonardo of bad faith, and ordering his return.

Shockingly, the king himself then intervened. He summoned the Florentine ambassador at the French court, Francesco Pandolfini, and made a formal, royal request to retain Leonardo's

services in Milan—perhaps the first instance in modern history whereby a king intervened with a fellow head of state for the services of an artist. “His Majesty summoned me to Him,” Pandolfini duly reported to his masters at the Signoria after the audience, and then quoted the king’s words verbatim:

“Tell them that I need your painter, Master Leonardo, who is living in Milan, because I wish him to make some things for me. See that your Signoria charge him with this task and command him to place himself immediately at my service, and that he does not leave Milan before my arrival. He is a good master, and I would like to have a number of things by his hand.”

What is so striking about this account is that Louis was remarkably circumspect about the “things by his hand” that he wanted Leonardo to execute. If the need for this artist was so urgent, why not tell the Signoria the reason? Pandolfini was actually wondering the same thing, and so he boldly asked the king “what sort of works he wanted from Leonardo.” But the king had no intention of divulging his plans to the Florentine republic. “Oh,” the king replied airily according to Pandolfini’s letter, “A number of small pictures of our Lady, and other things, depending on what springs to mind.”

This has prompted most historians to blithely accept that the king was referring to the *Madonna of the Yarnwinder*, painted by Leonardo in this timeframe. There are two problems with that assertion. One, as we know, that painting had already been commissioned by the king’s advisor, Florimond Robertet, some six years earlier. And two, there was no compelling reason for Leonardo to come to Milan in order to paint a picture of the Madonna; he could do that anywhere, and certainly in Florence, where he by now had set up a large studio.

In our opinion, the king knew very well what he was going to commission from Leonardo, now that the artist was in Milan: a lifesize copy of his *Last Supper* fresco, on canvas, so he could have it shipped back to his palace in Amboise. For that, of course, Leonardo *needed* to be in Milan, not only to work from the original, but also to recruit some of the same Milanese assistants who had collaborated on the fresco in the latter part of the 1490’s. Of course, such an enterprise would take many months, even years. This is why, we believe, the king chose not to make his intentions known to the Signoria, because such would undoubtedly have unleashed another storm of protests.

As an indication of the great importance that Louis attached to the project, the king then started to fret whether Pandolfini's plea would have its intended effect: to release Leonardo from his obligations in Florence. Consequently, just two days after his meeting with the Florentine ambassador, Louis took the unprecedented step of writing to the Signoria *himself*, in a letter drafted by Florimond Robertet—the same counselor who had previously commissioned the *Madonna of the Yarnwinder* from Leonardo. “Very dear and close friends,” the king began,

“As we have need of Master Leonardo da Vinci, painter to your city of Florence, and intend to make him do something for us with his own hand, and as we shall soon, God helping us, to be in Milan, we beg you, as affectionately as we can, to be good enough to allow the said Leonardo to work for us such a time as may enable him to carry out the work we intend him to do.”⁸

It is very doubtful that the king would have brought such intense diplomatic pressure on a state with which France was on friendly terms, simply to enable Leonardo to paint a portrait of a Madonna, which he could anywhere, not just in Milan. In our view, this is clear evidence that the king wanted Leonardo released for a major project, to be executed “with his own hand” and “for such a time” as it may require, and that this could only pertain to an endeavor as ambitious as creating a faithful copy of the *Last Supper*. Note, for example, that in this letter the king refers to *one* project, rather than the indistinct reference to things “on whatever comes to mind” as conveyed by Ambassador Pandolfini.

What's more, we believe there is other substantial evidence that this copy was indeed executed at Leonardo's second Milanese workshop between 1506 and 1509, and that it marshalled the talents of some of his finest collaborators, including Giampietrino (active 1495-1549), Andrea Solario (1460-1524), and Marco d'Oggiono (c. 1470- c. 1549), working under his direct supervision.⁹ Significantly, all three artists would in future years be retained by other patrons to produce another copy of the *Last Supper*, arguably on the strength of their work on the royal commission for Louis XII. That Leonardo himself agreed to undertake the project is attested by the fact that in the next communication from the royal French government of Milan to the Signoria, the artist was now referred to as “Master Leonardo da Vinci, painter to his most Christian Majesty.”

Louis himself would call Leonardo *nostre peintre*, “our painter.” All of a sudden, Leonardo had become the court painter of the French King.

The Last Supper Travels to France

At some point in late 1508 or early 1509, after the copy was finished, it was transported to Gaillon in France under the direct supervision of one of the artists on the project, Andrea Solario. By this time, Solario had established an excellent relationship with Charles d’Amboise, the Milanese governor, as well as with Charles’ uncle, Georges d’ Amboise, whom Louis XII had elevated to the position of First Minister. The French king himself had become embroiled in other conflicts, notably with Naples and Venice during the period known as the “Italian Wars” (1494-1556), so Georges now effectively ruled France while Louis himself was fighting in Italy. Thus, the *Last Supper* copy was dispatched to Charles’ chateau in Gaillon. What’s more, d’Amboise used the opportunity to also ask Solario to decorate a number of murals in the chapel of Château de Gaillon (which unfortunately were lost when the chapel was destroyed during the French Revolution). A Gaillon accounting statement, dated January 20, 1509, lists the remittance of 129 *livres* and 10 *soldi* (around \$1,500) *à Milan au peintre maistre André de Solario*.

Six years later, Louis XII succumbed to a severe case of gout (or arthritis), a very common affliction in that era, and died on January 1, 1515. The *Last Supper* copy therefore remained in the d’Amboise chateau in Gaillon. It is documented in an inventory of 1542 as *La Cène faicte en toile en grands personnaiges que feu Monseigneur fist apporter de Milan* (“the Last Supper made on canvas with monumental figures, which Monsignor had transported from Milan”).¹⁰ Here is clear proof that the *Last Supper* copy had been commissioned by d’Amboise, acting on the king’s orders, and that it was brought directly from Milan to Gaillon.

By the time the 1542 inventory was taken, Georges d’Amboise himself had passed away and his estate was put up for sale. The painting was taken to Antwerp, which at that time was one of the most prosperous cities in Northern Europe. In 1545, it was acquired by a cleric named Abbot Streeters for 450 guilders for the choir of a new abbey church, which was then under construction near the Belgian village of Tongerlo.¹¹ Save for periods during times of war and political upheaval, it has been there ever since.

In the archives of the Tongerlo Abbey itself is a handwritten account in 16th century Dutch, dated 1547, which validates our initial hypothesis to a remarkable degree:

It is said that the painting is made after an original, painted on a wall, that is now in bad repair. And that when a king of France, who conquered Milan, saw the painting, he was very disappointed that he could not take it with him since it was painted on a wall. And so he gave the order to have a copy made, and that's the copy that hangs in the choir today."¹²

The *Leonardeschi* Produce Other Copies

At some point after 1509 Andrea Solario returned to Italy, where he was able to capitalize on his work as one of the lead artists on the royal copy of the *Last Supper*. By then, the fame of Leonardo's Milan fresco had radiated all through Northern Italy, and several wealthy convents clamored to have the same painting in their refectories. Consequently, Solario was soon at work in painting *another* copy, this time in fresco, for the monastery at Castellazzo.¹³ Very few photographs exist of this remarkable work, which was destroyed during World War II. But the few black and white images that have survived reveal the extraordinary mastery of Solario in capturing both the form and spirit of Leonardo's original, based on his experience of collaborating on the Tongerlo copy.

Another prominent artist who had worked on the painting for the French king, Giovanni Pietro Rizzoli, who is referred to in Leonardo's notebooks as "Gian Pietro" or "Giampietrino," was also tapped to create another copy. This painting, known as the "Certosa di Pavia copy," is likewise noteworthy since the width closely matches that of the original fresco, some 25 feet (fig. 6). Pietro Marani dates this work to 1515, though other authors are inclined to give it an even later date.¹⁴



Fig 6. Giampietrino, *The Last Supper after Leonardo*, also known as the Certosa copy, ca. 1515

Unfortunately, the upper third of this painting was cut away, for no reason that anyone has been able to establish. Over a century later, in 1626, it appears in the inventory of the Certosa di Pavia (“Charterhouse of Pavia”), the vast monastery complex established in 1395 by the first Duke of Milan, Gian Giangaleazzo Visconti. Though the literature refers to it as the “Certosa di Pavia” copy, this particular monastery did not list the work in its inventory until that year, so it is possible that it was originally ordered by a smaller Carthusian convent, and later claimed by the Certosa when Leonardo’s original in Milan had become famous throughout Italy and beyond.

The Certosa copy was then acquired in 1821 by the Royal Academy of Arts in London. In the 1970’s, it was consigned to the chapel of Magdalen College at Oxford, where we saw it in a most deplorable location, on a damp wall without any temperature control, high above the door and therefore difficult to see. A lecture by the distinguished art historian Sir Ernst Gombrich, delivered at the time of its transfer to Oxford, could not mask the tragedy of the work’s removal from the main circuit of the London art world.¹⁵ Fortunately, after the recent renovation of Burlington House the Royal Academy brought the painting back to London in 2018, where today it occupies one of its principal galleries.

The third artist who worked on the Tongerlo copy, Marco d’Oggiono, was also able to parlay his experience into a later commission. This *Last Supper* copy, at roughly 2/3 scale, is today in the collection of the Château Écouen, north of Paris (fig. 7). Unfortunately, the dating of this work is uncertain, though the hand of d’Oggiono—with its tendency to “rubbery” figures, in Kenneth Clark’s words—is evident, particularly in the depiction of Christ and other portraits.¹⁶

Writing in 1952, Möller believed that this *Last Supper* was completed in 1530, arguably by D'Oggiono's assistants, after the artist perished in 1524 during an outbreak of the plague.



Fig 7. Marco D'Oggiono, *Last Supper* (after Leonardo), known as the Écouen copy, ca 1524-1530.

The painting has recently been restored, resulting in shockingly bright colors that have been harshly criticized in the press.

Meanwhile, the royal copy of the *Last Supper* continued to slumber in the convent of Tongerlo. Just before 1721, the work was moved to the central nave, near the northern transept, as part of the refurbishing of the church in the rococo style. The French Revolution and Napoleon's subsequent conquest of the Netherlands placed the work in acute danger of destruction or theft. In response, the canvas was placed in the home of a notary in Herselt, while the abbey was decommissioned and the monks were evicted.

In 1825, the work then appears in an inventory of a painter in the Belgian city of Mechelen, and from there it wound up in the private collection of the Belgian King Leopold I. In 1840, after the abbey was restored, the monks initiated a campaign to reclaim the painting, ostensibly to place it in the Tongerlo convent church once more. These efforts were successful, and documents show that the monastery re-acquired the canvas in 1868. The prior's real motive, however, was to offer the work for sale to museums in Brussels, Antwerp, and Berlin, as part of a fundraising effort to restore the much-damaged abbey. A sale was indeed agreed upon, to a

buyer in England, and as a result the large canvas was shipped to Spalding, Lincolnshire. However, no buyer materialized in the end.

In 1902, the work returned to Belgium, where it underwent a restoration before being once again framed and placed in the right transept of the abbey church in Tongerlo. Unfortunately, some 34 cm of the width and 44cm of the height of the canvas was cut at this time. In 1920, the canvas was moved to a location above the entrance, and it was here that disaster struck in 1929: a fire broke out in the church. In the frantic efforts to rescue the painting, more damage was inflicted. Eventually, an Antwerp restorer named Arthur van Poeck conducted an initial restoration, followed by a more complete restorative effort by the Belgian Royal Institute for Artistic Heritage in 1968.¹⁷ This is the painting we see today.

Digital Analysis of High-Resolution Scans

A summary of our findings was published in our 2019 book *The Da Vinci Legacy* (Apollo Publishers). But several historians, notably in Belgium, remained skeptical, particularly with regards to our assertion that of all the Apostles in the Tongerlo *Last Supper*, the treatment of John and Jesus stand out because of its exceptional quality, particularly with regards to their delicate *sfumato* treatment. This, we argued, suggests that the faces of these figures may have been painted by Leonardo himself, in keeping with the king's stated desire to have the painting done "by his own hand," at least with regards to some passages.

That Leonardo would elect to paint these two faces himself, while delegating the other figures to his associates, is plausible when we remember that Christ and John are the two most prominent subjects of the painting. During the Middle Ages (and even in some evangelical circles today), the belief was widespread that the Gospel of John, which formed the basis for Leonardo's *Last Supper* fresco, was written by "John, the beloved disciple"—the young man who is invariably depicted at Jesus' side. Modern research has questioned that idea, but of course that was of no consequence in the 16th century.¹⁸ In fact, the idea that the faces of Jesus and John in the Tongerlo canvas were painted by Leonardo was initially suggested by Pina Brambilla, the Italian curator who worked on the restoration of the Milan fresco for 19 years. As part of her research, she studied the Tongerlo painting in detail, and came away convinced that these two figures were autograph works.¹⁹

To further study this attribution in-depth, we undertook two tasks. The first was to create high-resolution 4K digital images of the Milan fresco, the Tongerlo canvas, and its nearest copy, the Giampietrino canvas now in the Royal Academy of Arts in London. Using the digital facilities of Pantheon Studios in Santa Monica, CA, we then created a detailed comparison of these works by superimposing each of the four principal groups in Leonardo's composition using the Milan fresco as the base line.

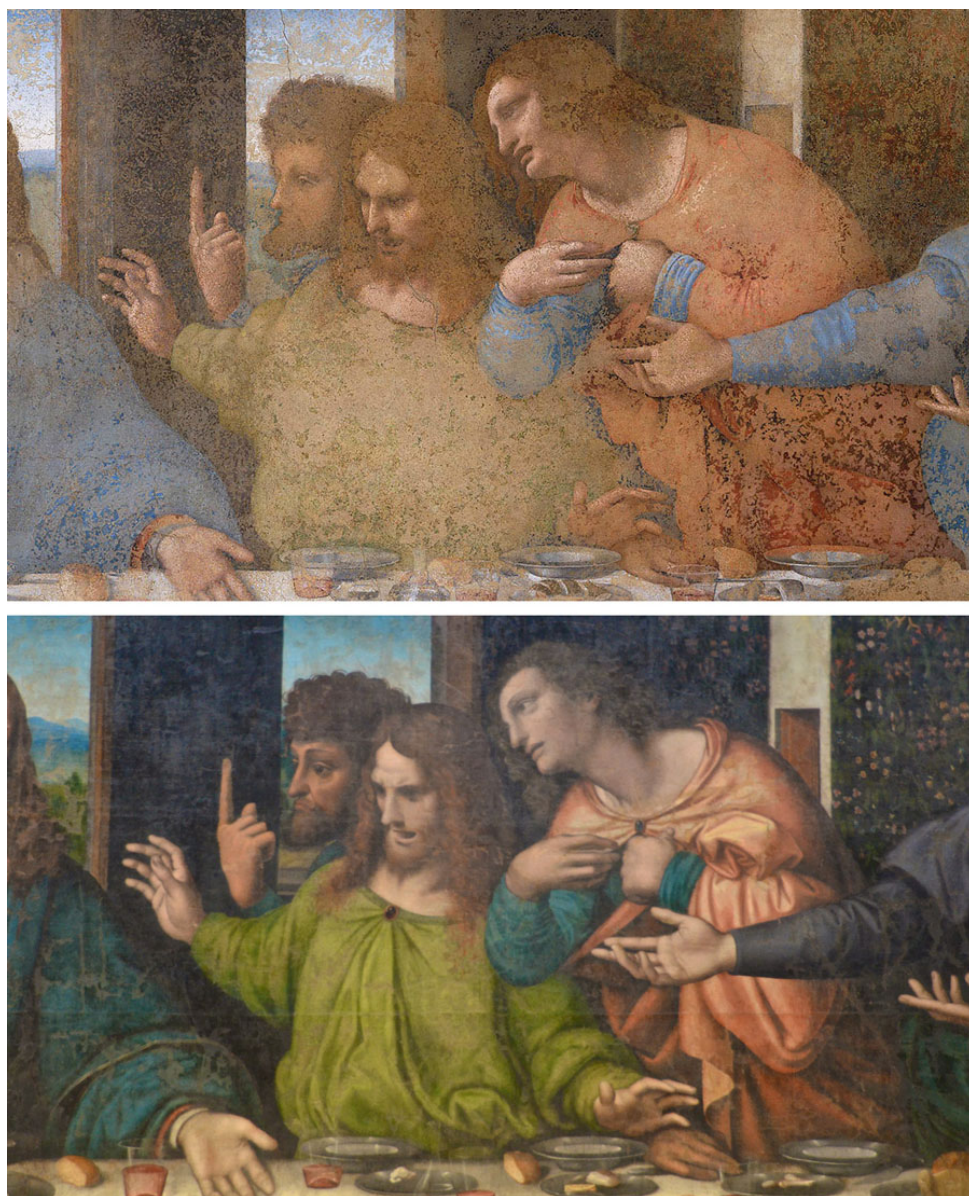


Fig 8. *Thomas, James the Great and Philip*, from Leonardo's original and the Tongerlo copy

The result was quite astonishing. In the case of the Tongerlo canvas, three of the four groups matched the original fresco to remarkable degree. While there were some differences in the execution of the figures, the composition itself remained largely intact. Such a close match, we believe, could not have been realized with a freehand drawing; it would have required some form of mechanical transfer. The most obvious conclusion, then, was that the artists used the same cartoon designs that had originally been used for the fresco. Only in this manner could they achieve an almost exact replica of the fresco, notwithstanding the fact that the original was painted high up on a wall.

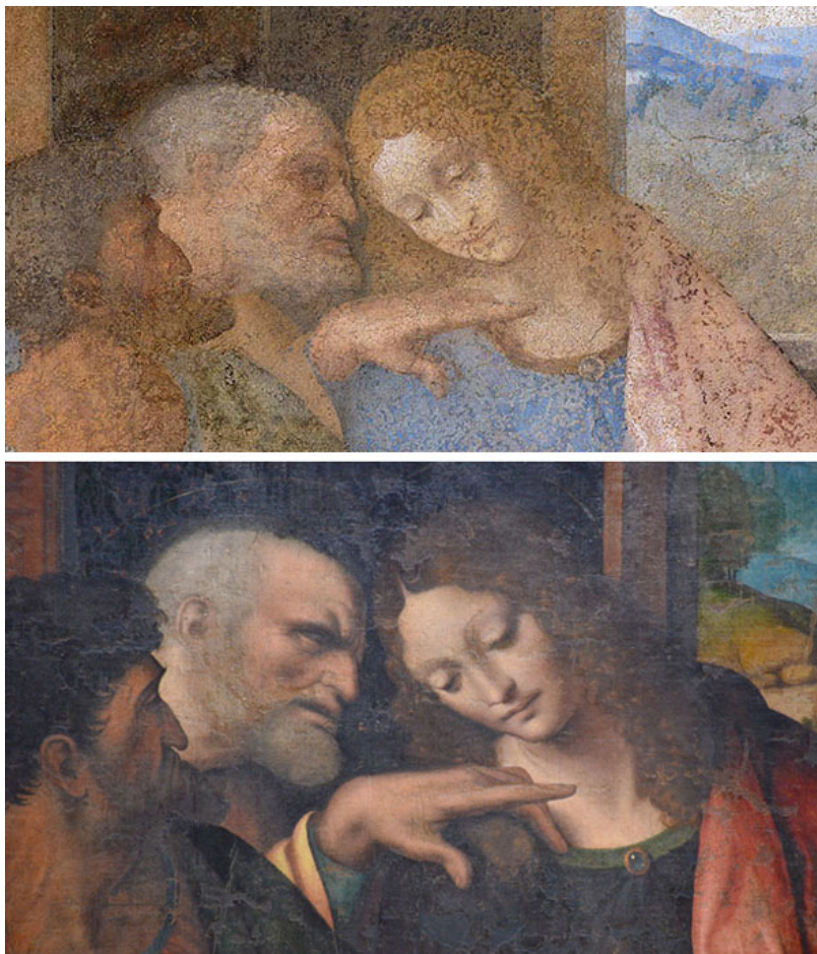


Fig 8. *Judas, Peter, and John*, from Leonardo's original and the Tongerlo copy

This hypothesis is supported by recent multispectral studies of Leonardo's other principal work from his Milan period, the *Virgin of the Rocks*, of which the artist produced two versions. These studies reveal that Leonardo's *modus operandi* in Milan was to first make detailed studies

of key passages of a future painting (such as the *Virgin of the Rocks* or the *Last Supper*), which sometimes resulted in finished drawings. Once Leonardo was satisfied with the final design, these drawings were then transferred to cartoons, which in turn were imprinted on the panel or wall using the *spolveri* or “pouncing” method of piecing the lines with tiny pin pricks, through which soot or charcoal was rubbed.

Given the existence of several high-quality portrait studies for the Milan *Last Supper* fresco, it is very likely that Leonardo developed this process as early as the mid-1490’s, specifically for this painting. Only by breaking down the vast expanse of this fresco into manageable components could the artist retained control of the overall composition.

The idea that Leonardo would carefully preserve his designs and cartoons is attested by the fact that long after his death, his cartoons would remain in active circulation, eagerly sought after by the *Leonardeschi* and other artists. This explains why numerous paintings painted by Leonardo’s followers appear to be closely inspired by the master’s drawings, long after the master had passed away.²⁰ In the case of the royal commission for the *Last Supper* copy, the existence of the original cartoons was particularly fortuitous, since it allowed the artists to work from the very same designs that had produced the mural in the refectory of the Santa Maria delle Grazie. In fact, given the subtle stylistic differences between the individual groups as shown on these pages, it appears that each group was allocated as a single unit to a particular artist.

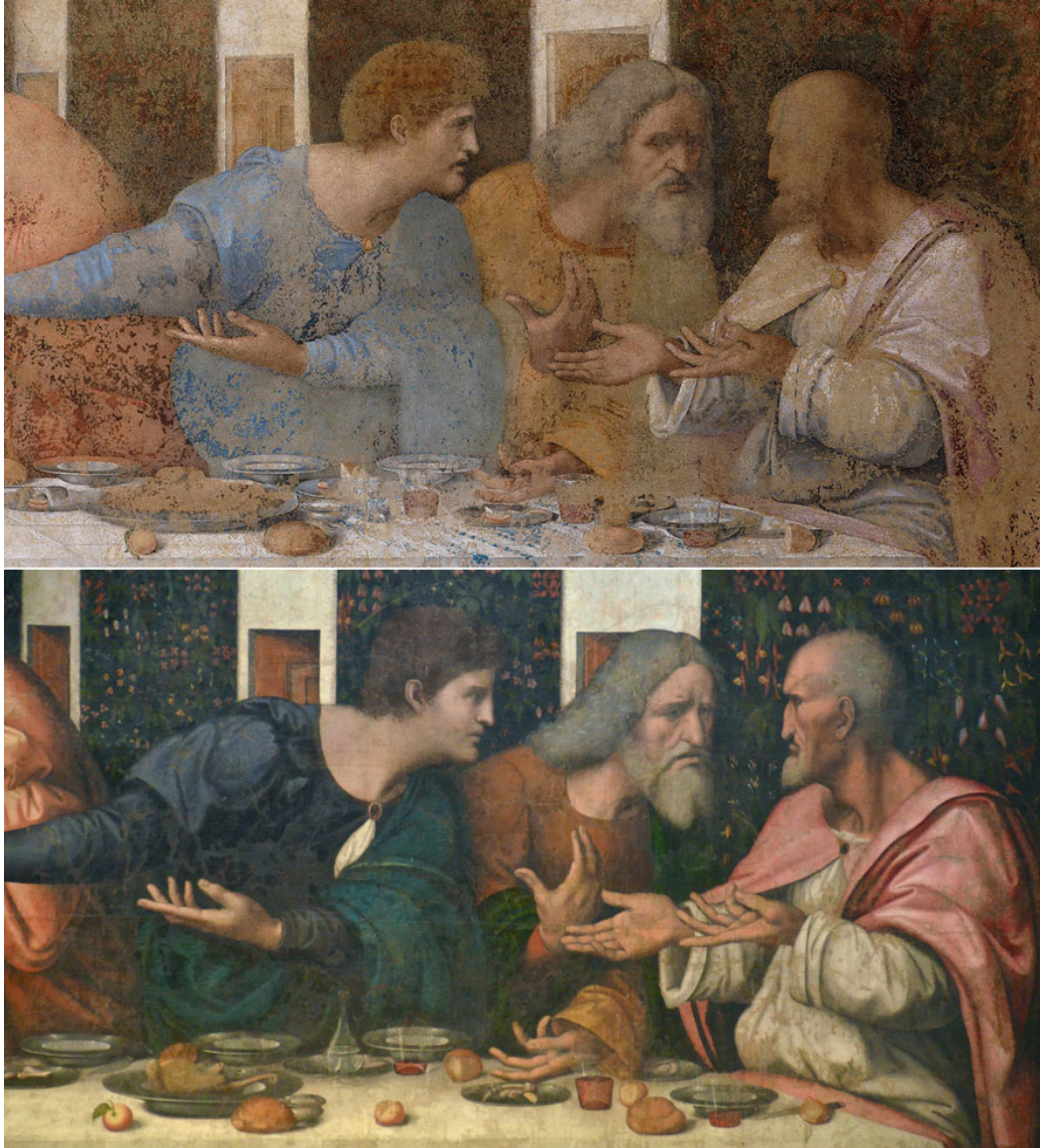


Fig 10. *Matthew, Thaddeus and Simon*, from Leonardo's original and Solario's copy

For example, whereas the treatment of the group of “Thomas, James the Greater and Philip” located to the right of Christ betrays the hand of Andrea Solario, the group of “Matthew, Thaddeus and Simon” is clearly the work of Marco d'Oggiono. In fact, his depiction of Simon would years later inspire the figure of Joseph in his painting *Holy Family with John the Baptist and Angel* (ca. 1515), now in the Dr. Bhau Daji Lad Museum (formerly the Victoria and Albert Museum) in Mumbai (fig. 11).



Fig. 11. Marco d'Oggiono, *Holy Family with John the Baptist and Angel*, ca. 1510-1515, and a detail of the Tongerlo copy of Leonardo's *Last Supper*, 1507-1509.

Interestingly, we did not find a similar close match when superimposing the digital scans of the Certosa copy painted by Giampietrino, currently at the Royal Academy of Arts. While the gestures and expressions of the Apostles are broadly similar, the composition itself diverges significantly.

Our conclusion, then, is that when Giampietrino was commissioned to paint *his* copy of the *Last Supper*, Leonardo had already left Milan for Rome (and later, Amboise), and the original cartoons were no longer available—either because Leonardo took them with him, or because they had been given (or sold) to other artists.

The Multispectral Study

In the Spring of 2019, we decided to test our cartoon hypothesis by examining the details of four key portraits in the Tongerlo canvas with multispectral cameras. The Belgian company IMEC graciously made this equipment and their staff available, while the Abbot of Tongerlo Abbey, Jeroen de Cuyper, and the curator of the painting, Father Ivo Cleiren, made every effort to support the imaging session.

In analyzing the results of this study, we drew from a 2010 multispectral study of the London version of *The Virgin of the Rocks*, conducted by Luke Syson and Larry Keith, curators of the 2012 exhibit *Leonardo da Vinci: Painter at the Court of Milan* at London's National Gallery. These results were particularly significant for our study, since both the Tongerlo *Last Supper* and the London *Virgin of the Rocks* reached their final form in roughly the same time period, 1506-1509, with the proviso that the London panel was probably begun in the late 1490's and then lay dormant while Leonardo lived in Venice and Florence. The infrared reflectography investigation of the London *Virgin of the Rocks* revealed that much of the composition was laid out with a detailed underdrawing, but that this underdrawing is actually a composite of multiple cartoon transfers. This finding matched an earlier study of the Louvre *Virgin of the Rocks*, once again establishing that Leonardo tended to re-use (or "re-cycle" in Keith's words) the cartoons he had created previously for other art works.

There was a unique twist, however.

Infrared reflectograms reveal that Leonardo originally began the second version of *The Virgin of the Rocks* with an entirely different composition in mind: one in which the face of the Virgin is shown in profile, with her right arm outstretched. This position is reminiscent of Leonardo's study for an *Adoration of the Christ Child*, dated between 1486 and 1489 and now in the Royal Collection at Windsor. The detail of the Virgin's head and hand, Keith noted, also appears in other works from this Milan period, notably the *Last Supper* and the *Portrait of Cecilia Gallerani* ("*The Lady with an Ermine*"), which suggests that Leonardo re-used these partial cartoons for a variety of purposes.²¹



Fig. 12. Infrared reflectogram of Mary in the London *Virgin of the Rocks* revealing the unused underdrawing (Courtesy, London National Gallery).

In the end, however—an exact date is difficult to determine, though 1506 would be a reasonable guess—Leonardo decided to revert to the composition he’d used in the Louvre version of *The Virgin of the Rocks*. At that time he may have availed himself once more of the original cartoons for that painting, which had been completed more than 20 years earlier. He was thus able to achieve a very close match to the original composition. These underdrawings were transferred directly to the *gesso*, and then covered with a “thin, off-white imprimatura layer consisting of predominantly lead white and black in a medium of linseed oil.”²²

We believe that a very similar process took place in the execution of the Tongerlo *Last Supper*. The fact that this vast work would be undertaken for the French king, who was now in control of the duchy of Milan, would have given urgency to the project, and further motivated the use of the cartoons from the original fresco. It is also likely that the actual copying took place in the refectory of the Santa Maria delle Grazie, so that the artists could follow the color scheme, the use of *chiaroscuro* (the manipulation of light and dark passages), and artistic nuance of the original.

The Tongerlo painting was executed on a canvas-type support in the form of five strips of hemp, which further supports its Italian origin; in North Europe, artists generally preferred

linen.²³ The seams of these strips are visible on the painted ceiling, under the hands of the figures, and along the painted tablecloth. The base ground consists of a grey prime layer of lead white and calcium carbonate, mixed with oil.

During our multispectral analysis, we focused on the portraits of four figures in the painting: John and Christ (identified by Brambilla as possible autographs), and Andrew and James Major as our control. Ultraviolet images were used to identify the different fluorescence characteristics of the pigments in the paint. The painting was executed with red ochre, brown ochre sienna, red vermilion, blue azurite, green copper resinate and green malachite, which conforms to pigments that were available and used in Leonardo's studios in the first decade of the 16th century. Flesh layers in particular contained lead white, calcium carbonate, and yellow ochre. This palette corresponds to that of another Leonardo work from the 16th century, the *Earlier Mona Lisa* (the first iteration of the *Mona Lisa* portrait, previously known as the *Isleworth Mona Lisa*), which was examined in a series of tests in the early 21st century by Pascal Cotte in Paris and Dr. Hermann Kuhn in Switzerland.²⁴



Fig. 13. Leonardo's study for Christ, ca. 1495 (left) and the visible and near-infrared (VNIR) reflectance image of Christ from the Tongerlo *Last Supper*

Ultraviolet light illumination can also identify differences in pigment fluorescence, for example, those between 16th century pigments that were obtained from largely mineral and organic sources, and modern pigments from the 20th century onwards that are of mostly chemical origin. This is particularly evident in the image of Christ (fig. 13). Here, the intervention by restorers, either during the Van Poeck campaign of 1932-1933 or the Royal Institute campaign of 1958, was such that most of the original painted surface was obscured. We were therefore not able to either confirm or reject Brambilla's hypothesis that the portrait of Christ was painted by Leonardo himself. Additional multispectral studies will be necessary, which we hope to resume later in 2019.

The infrared image of John, on the other hand, was only partly obscured by modern pigments. It therefore allows us to see the original portrait as painted in the early 16th century. The delicate treatment of sfumato, particularly in the execution of the eyes and lower part of the face, closely resembles Leonardo's other portraits from this period, including the angel in the London *Virgin of the Rocks* (fig. 14).

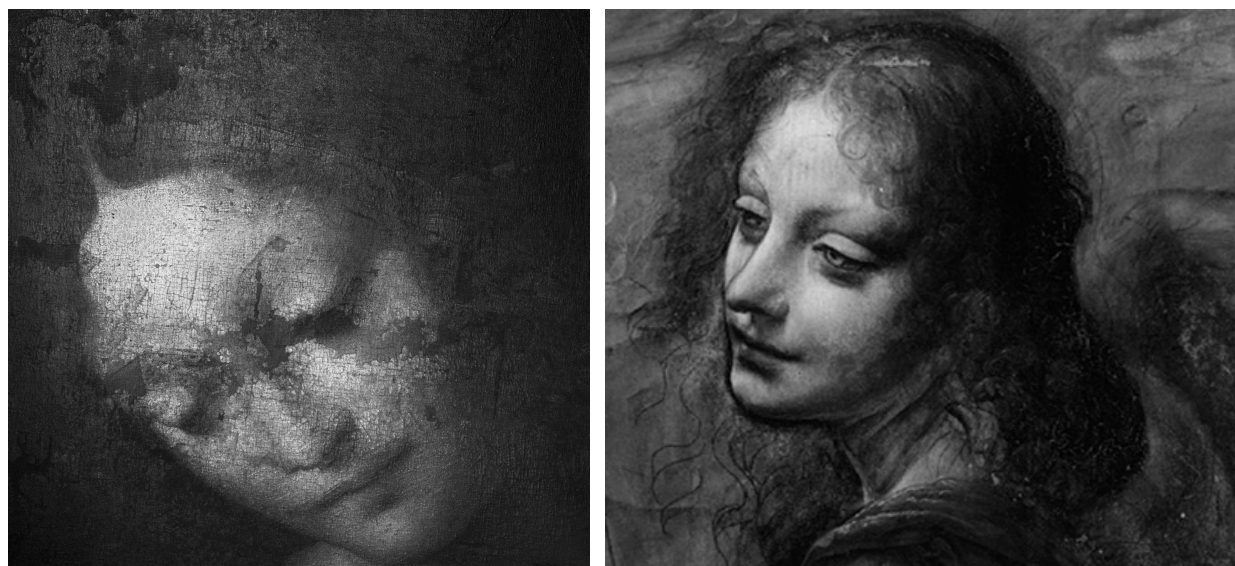


Fig 14. VNIR reflectance of John in the Tongerlo *Last Supper* (left) and an infrared reflectogram of the angel in *The Virgin of the Rocks* (Courtesy, London National Gallery)

In our opinion, no other artist in the first half of the 1500's had yet mastered this technique of rendering a human face through such subtle nuances in light and shadow. Therefore, we believe

that the face of John was indeed painted by Leonardo himself, which would make this the first instance of a Leonardo autograph on Belgian soil.

The infrared images shown in figure 14 also illustrate another common feature: both reveal the clear outline of an underdrawing underneath the painted surface. This may support our theory that, as in the case of the London *Virgin of the Rocks*, Leonardo used the cartoon from the first version of the work (i.e., the Milan fresco) to create a painting that was as close to the original model as possible. This is particularly significant because, as figure 15 shows, very little remains of the figure of John in the fresco in the Santa Maria delle Grazie.

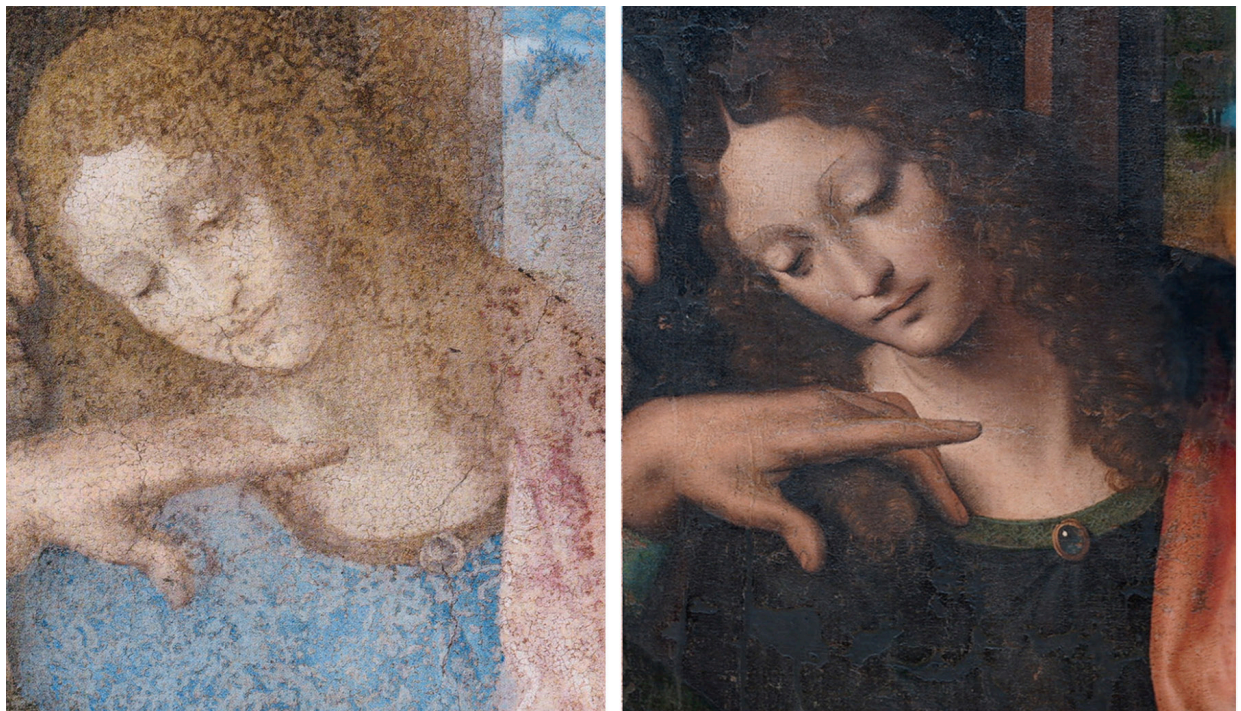


Fig. 15. The Apostle John in the Milan fresco of the Last Supper (left) and the Tongerlo version (right).

The Tongerlo painting therefore gives us the closest approximation of this seminal figure in Leonardo's composition, not only with regard to the loving treatment of its features but also the detail of the curly hair, a uniquely Milanese attribute that would be continued in the treatment of Lisa del Giocondo in the Earlier *Mona Lisa*. With his youthful beauty, this John offers a striking contrast with the aging Peter, who in Leonardo's elegant narrative has beckoned John and is whispering in his ear—thus illustrating the moment in John's Gospel where Peter motions John

to ask Jesus “of whom he was speaking” when he said that one of them will betray him (John 13:21).

While Peter is making his request, gesturing with his left hand, Leonardo shows his right hand quietly curling around a knife on the table. Peter has not forgotten his role as Jesus’ principal aide and protector. He knows that, if indeed there is someone within the group who poses a threat, it is *his* duty to defend Jesus. This detail is all but lost in the original Milan fresco, but it appears with startling clarity in the Tongerlo painting.

Of the four sets of multispectral scans, the detail of James the Greater was particularly intriguing. The quality of the painted surface underneath the restoration surprised us for its exceptional fidelity to the original, particularly when compared to Leonardo’s original study for this Apostle (fig. 16). While the execution reveals the hand of Solario, one of Leonardo’s most accomplished followers, it suggests that the artist had access to either Leonardo’s original drawings or the cartoons used for the Milan fresco. This verisimilitude is especially striking when compared with Giampietrino’s version of James the Greater in his 1515 copy, now in London (fig 6).

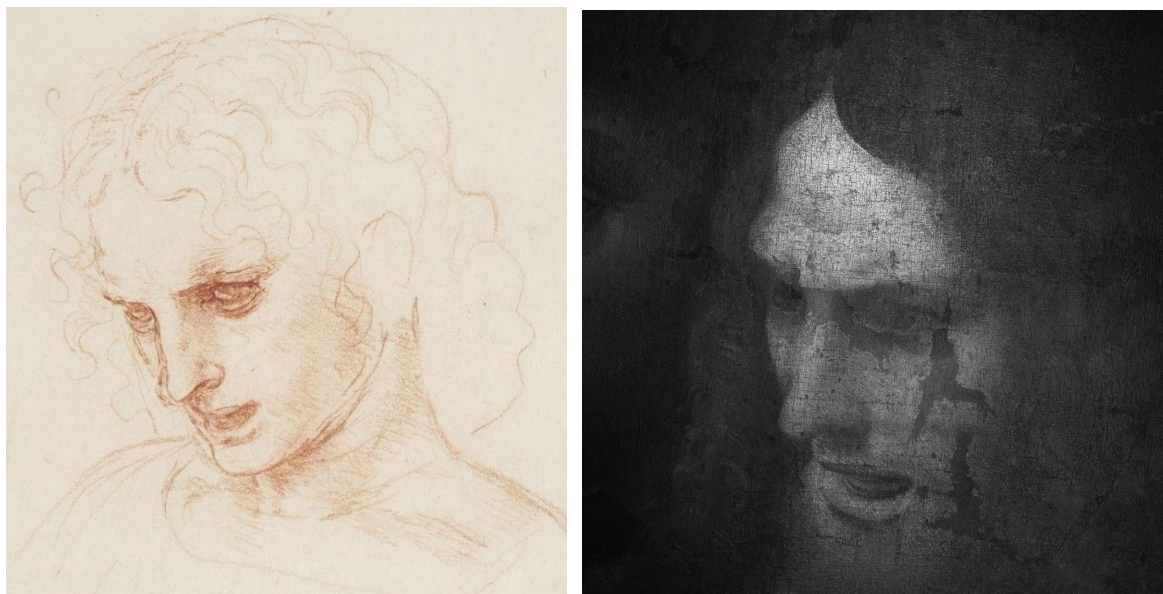


Fig 16. Study for James the Greater (detail), ca. 1495 (left), and the VNIR reflectance image of James the Greater in the Tongerlo canvas (right).

Notwithstanding its close fidelity to the original *Last Supper* fresco, the Tongerlo painting is not a “copy” in the conventional sense of the word. Throughout the vast canvas we can see

substantial changes from the Milan version, which can only have been suggested by Leonardo—either to improve on the original fresco, or to explore a more a satisfying solution. For example, the table is placed slightly lower than in the original, perhaps to enhance the monumentality of the figures seated behind it. Also, the head of Christ is now placed in the center of the window behind it, rather than to the side. The most obvious change, however, is in the rich execution of the tapestries hanging on the wall behind the Apostles. In Milan, these tapestries conform to a repetitive knotted pattern, reminiscent of the hem of the dress of the *Mona Lisa* and Leonardo’s decoration of the Sala delle Asse in the Castello Sforzesco.

In Tongerlo, however, this pattern is replaced with colorful *millefiori* decorations, perhaps inspired by North European tapestries that were then becoming *en vogue* in Northern Italy.²⁵ No copyist would have endeavored to make such a radical change in the model of the original work, which further supports our hypothesis that the overall execution of the painting was supervised by Leonardo. Perhaps the change to a more “French look” in the background tapestries reflected a desire to conform to the prevailing taste at the royal court of Amboise.

In sum, the body of evidence described herein strongly supports, in our opinion, the identification of the Tongerlo *Last Supper* as the most faithful copy of Leonardo’s original fresco, or perhaps as a “second version” of the *cenacolo* painting, similar to the way that the London *Virgin of the Rocks* reflects a further development of the original work now in the Louvre.

* * * * *

End Notes

¹ Leo Steinberg, *Leonardo's Incessant Last Supper*. New York: Zone Books, 2001; p. 244.

² King, Ross, *Leonardo and the Last Supper*, p. 89.

³ The complete sentence reads: "Item de' sollicitare Leonardo Fior. no perché finisca l'opera del Refettorio delle Gratie principiata, per attendere poi ad altra Fazada d'esso Refettorio et se facciamo con lui li capituli sottoscritti de mane sua che lo obligiano ad finirlo in quello tempo se convenera con lui." From L. Beltrami, *Documenti e memorie riguardanti la vita e le opere di Leonardo da Vinci*; doc. 61.

⁴ Martin Kemp (Ed.), *Leonardo on Painting*. New Haven: Yale University Press, 1989; p. 144.

⁵ We should remember that Vasari became a client of the new authoritarian Medici regime led by Duke Cosimo I. He wholeheartedly embraced the intense propaganda cult that Cosimo initiated to seek legitimacy for his rule. The purpose of this propaganda sought to sway a wary Florentine public that had long prided itself on being one of the few "democratic republics" on the Athenian model in Europe. This explains why Vasari's book largely focused on artists in the duchy of Florence while omitting many other talented artists, notably in Venice.

⁶ Giorgio Vasari, "Lionardo da Vinci," in: *Le Vite de' più eccellenti pittori, scultori e architetti*; 1568 Edition.

⁷ Among others, George's father, Pierre d'Amboise, was a chamberlain to Charles VIII, while his brother, Charles d'Amboise, had been a governor of various regions for Louis XI. Georges himself became a bishop at age 14. This was not unusual in a time when such positions were prized for their political rather than spiritual value, and many bishoprics were bought or sold for the considerable influence that they could wield, regardless of the spiritual abilities of the individual involved.

⁸ Louis XII, *Letter to the Signoria of Florence*, January 14, 1507, reproduced in Vincent Delieuvin, *Saint Anne: Leonardo's Ultimate Masterpiece* (Paris: Musée de Louvre, 2012), 127.

⁹ For a detailed description of these artists and their collaboration with Leonardo, as well as their subsequent oeuvre, see Jean-Pierre Isbouts and Christopher H. Brown, *The Da Vinci Legacy*. New York: Apollo Publishers, 2019.

¹⁰ E. Möller and J. Martin-Demezil, "L'art et la Pensée de Léonard de Vinci, Communications du Congrès International du Val de Loire," in *Etudes d'Art*, Paris-Algiers 1953-1954, p. 263.

¹¹ R.H. Marijnissen, *Het Da Vinci Doek van de Abdij van Tongerlo*, 1959; p. 4. That the friars took the preservation of their valuable canvas seriously is attested by the fact that in 1594, special curtains were procured and dyed to serve as protection against the sun.

¹² The original text reads: "Men segt dat de patroon daer de selve schilderije near gemaect is in Milaan, nu zeer beschaedigt, tegen eene muer geschildert sijnde. En dat wanneer eenen coninck van vrangkrijk Milanen gewonnen hadde, siende dese schilderij hem seer leet was da thy die niet mede mocht nemen overmits die tegen de muur geschildert was, maar order gegeven te hebben

om dat the contrefeyten, wel conterfeijtselven men segt t'selve te sijn dat in den coir hangt." We are grateful to Father Kees van Heijst, principal archivist at the Abbey of Tongerlo, for identifying this document in the abbey's archives.

¹³ J. Murray, *The Academy*, 1882. The author also visited the abbey of Tongerlo, where he admired the newly restored copy by Solario, "in an excellent state of preservation."

¹⁴ Pietro Marani, *Leonardo da Vinci: The Complete Paintings* (New York: Abrams, 2000): p. 309.

¹⁵ E.H. Gombrich and Piers Rodgers, *Papers Given on the Occasion of the Dedication of the Last Supper (after Leonardo)*, Magdalen College, Oxford, March 10, 1993. Gombrich opened his remarks by saying that "it is most unlikely that Leonardo would have approved of my attempt to talk about this work or its copy." Given the astonishing lack of care shown to the painting in its position high above the entryway of Magdalen's chapel, against the damp brick and utterly cast in shadows, we would tend to agree with him.

¹⁶ We know that the Château Écouen was acquired in 1515 by Anne, Connétable de Montmorency, and then vastly expanded from 1538 onwards by the architect Jean Bullant. Documents indicate that Montmorency was indeed interested in obtaining a copy of Leonardo's *Last Supper* for his chapel at the Château Écouen. The constable had been an important councilor at the court of François I, and had accompanied his sovereign to Milan in 1515, when he must have seen the original fresco in the Santa Maria delle Grazie. He then served the king faithfully as Grand Master and governor of Languedoc, until he failed to forge a peace treaty between François and Emperor Charles V in 1541. As a result, he fell from royal favor, was forced to retire from court, and settled in his chateau at Écouen. Here, he supervised the start of work on the chapel, which was not completed in 1547. And therein lies the problem: although the circumstances of his death are uncertain, d'Oggiono is believed to have passed away in 1524 during an outbreak of the plague. His assistants may have finished the work, perhaps aided by French artists. Nonetheless, though it is unsigned, Marco d'Oggiono had long been identified as the artist, beginning with Seidlitz's analysis of 1909.

¹⁷ Laure Fagnart, "La Cène de Tongerlo," in Carlo Pedretti, *Leonardo: The European Genius*. Catalogue of the exhibit at the Koekelberg Basilica in Brussels. Cartei & Bianchi Edizioni, 2007; p. 157-171.

¹⁸ For a discussion of the authorship of the Gospel of John, please see Jean-Pierre Isbouts, *In the Footsteps of Jesus*; Washington, D.C.: National Geographic, 2009.

¹⁹ We are grateful to Father Ivo Cleiren, the curator of the Tongerlo *Last Supper* at the Abbey of Tongerlo, for relating Pina Brambilla's comments to us.

²⁰ For a discussion of the use of Leonardo's cartoons, see Jean-Pierre Isbouts and Christopher H. Brown, *The Da Vinci Legacy*. New York: Apollo Publishers, 2019.

²¹ Luke Syson and Larry Keith, *Leonardo da Vinci: Painter at the Court of Milan*. Exhibition Catalog, National Gallery, 2012: p. 65-66.

²² Ibid., p. 68.

²³ Lefevre, Rene, *Het laatste avondmaal van Tongerlo: Materiele gegevens*. Bulletin de l'institut royal du patrimoine artistique, X, 1967-1968, pp. 16-31.

²⁴ See "Scientific Examination of the Earlier *Mona Lisa*," in Isbouts, Jean-Pierre (Ed.), *Leonardo's Mona Lisa: New Perspectives*. Santa Barbara, CA: Fielding University Press, 2019; pp. 164-172.

²⁵ Laure Fagnart, “La Cène de Tongerlo;” p. 169.