Leonardo's Virgin of the Rocks: The History, the Mystery, and the Museums' Considerations of the Two Paintings

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ABSTRACT OF THESIS

Leonardo’s *Virgin of the Rocks*: The History, the Mystery and the Museums’ Considerations of the Two Paintings

The two versions of the *Virgin of the Rocks* have generated continued debate amongst art historians. Scholars such as Pietro Marani, Martin Davies and William Cannall have compiled opposing theories on the subject while referencing the same material. Despite the discovery of original documents pertaining to the commission of the painting, researchers continue to argue over the following: why do two versions of the same painting exist that are both associated with Leonardo da Vinci, where did the original version go after its completion, and who was responsible for the second painting? The following research will answer these questions and discuss the treatment of both paintings while in their respective art institutions, the Louvre in Paris and the National Gallery in London. The examination of the museum’s conservation practices, scientific research and previous and upcoming exhibitions will aide in solving the mystery surrounding Leonardo’s *Virgin of the Rocks*.

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Leonardo’s *Virgin of the Rocks*: The History, the Mystery, and the Museums’ Considerations of the Two Paintings

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History

by

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# Table of Contents

Introduction ................................................................. 1

**Part I  THE HISTORY**

**Chapter 1  Leonardo in Florence** ........................................ 9
   A Brief History of Leonardo da Vinci
   Leonardo in Milan
   Leonardo as an Artist
   Leonardo and Science

**Chapter 2  The Church, the Confraternity and the Commission** .......... 25
   The Church of the Immaculate Conception
   Giacomo del Maino’s *Ancona*
   Leonardo’s Commission
   Legal Issues

**Chapter 3  The Mystery of the Two Paintings** .......................... 39
   The Purchase of the First *Virgin of the Rocks*
   Contrasting Theories
   Who Painted the Second *Virgin of the Rocks*?

**Chapter 4  Comparing and Interpreting the Two Paintings** .......... 56
   The Louvre’s Painting
   The National Gallery’s Painting
   The Two Side Panels
   The Geological Difference between the Two Paintings
   Reproductions
   Religious Interpretations of the Two Paintings
PART II THE MUSEUMS

Chapter 5 Museum Acquisition, Conservation and Research 85
Acquisition of the National Gallery’s Panels
Conservation of the Louvre’s *Virgin of the Rocks*
Recurring Themes
Cartoon Application and Composition B
Leonardo’s Studies and Drawings

Chapter 6 Museum Protection during World War II 113
The Louvre during World War II
The National Gallery during World War II

Chapter 7 Museum Education and Exhibitions 119
The National Gallery’s Future Exhibition
Exhibiting Leonardo’s Studies
The Universal Leonardo Project
Conclusion 127

Works Cited 134
List of Illustrations
All works are attributed to Leonardo da Vinci unless otherwise specified

Figures

1. Study of a horse from the front divided by lines 10
2. Study of a horse in profile and from the front 10
3. Virgin of the Rocks (Louvre painting, detail) 15
4. Virgin of the Rocks (Louvre painting, detail) 15
5. Study for the angel in Virgin of the Rocks (Louvre painting) 17
6. Drapery of a kneeling figure 17
7. Copy of Leonardo da Vinci’s A study of a pointed hand for the angel in Virgin of the Rocks (Louvre painting) 17
8. Giovanni Antonio Boltraffio Madonna and Child 21
9. Giovanni Antonio Boltraffio, Madonna and Child with Saints John the Baptist and Sebastian and Donor 21
10. Giampietrino, The Virgin Nursing Child with Saint John in Adoration 21
11. Angelo del Maino, Madonna and Child in Carved Altarpiece 33
12. Virgin of the Rocks (Louvre painting) 40
13. School of Leonardo, Virgin of the Rocks (National Gallery painting) 48
14. Giovanni Antonio Boltraffio and Marco d’Oggiono, Resurrection of Christ with Saints Leonard and Lucy 52
15. Marco d’Oggiono, The Thuelin Madonna 52
16. Ambrogio de’ Predis, Girl with Cherries 54
17. La Scapigliata 54
18. Comparison of both Virgin of the Rocks 61
19. Ambrogio de’ Predis, An Angel in Green with a Vielle 67
20. Ambrogio de’ Predis, An Angel in Red with a Lute 67
21. Donato Bramante, Armed Men Series 67
22. Donato Bramante, Armed Men Series 67
<table>
<thead>
<tr>
<th>No.</th>
<th>Artist</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.</td>
<td>Anonymous</td>
<td>Virgin of the Rocks</td>
<td>73</td>
</tr>
<tr>
<td>24.</td>
<td>Bernardino de’ Conti</td>
<td>Madonna with Child and Saint John</td>
<td>73</td>
</tr>
<tr>
<td>25.</td>
<td>Giampietrino</td>
<td>Adoration of Christ by Saints</td>
<td>78</td>
</tr>
<tr>
<td>26.</td>
<td>Fra Antonio da Manza</td>
<td>Pentecost</td>
<td>78</td>
</tr>
<tr>
<td>27.</td>
<td>Cesare Magni</td>
<td>Virgin of the Rocks</td>
<td>78</td>
</tr>
<tr>
<td>28.</td>
<td>Bernardino de’ Conti</td>
<td>Madonna with Child and Saint John (National Gallery painting)</td>
<td>73</td>
</tr>
<tr>
<td>29.</td>
<td>Giampietrino</td>
<td>Adoration of Christ by Saints</td>
<td>78</td>
</tr>
<tr>
<td>30.</td>
<td>Cesare Magni</td>
<td>Virgin of the Rocks</td>
<td>78</td>
</tr>
<tr>
<td>31.</td>
<td>Last Supper</td>
<td>(detail of Saint Philip)</td>
<td>101</td>
</tr>
<tr>
<td>32.</td>
<td>Study of a young man</td>
<td></td>
<td>101</td>
</tr>
<tr>
<td>33.</td>
<td>Adoration of the Magi</td>
<td>(detail)</td>
<td>101</td>
</tr>
<tr>
<td>34.</td>
<td>Composition A</td>
<td>(detail)</td>
<td>104</td>
</tr>
<tr>
<td>35.</td>
<td>Saint Jerome</td>
<td>(detail)</td>
<td>104</td>
</tr>
<tr>
<td>36.</td>
<td>Composition B and Virgin of the Rocks</td>
<td>(National Gallery painting)</td>
<td>107</td>
</tr>
<tr>
<td>37.</td>
<td>Composition B</td>
<td>(detail of Virgin)</td>
<td>107</td>
</tr>
<tr>
<td>38.</td>
<td>Composition B</td>
<td>(detail of Gabriel)</td>
<td>107</td>
</tr>
<tr>
<td>39.</td>
<td>Study of Infant and Foot of Adult</td>
<td></td>
<td>112</td>
</tr>
<tr>
<td>40.</td>
<td>Studies of a baby (RL 12569)</td>
<td></td>
<td>112</td>
</tr>
<tr>
<td>41.</td>
<td>Study of a baby (RL 12568)</td>
<td></td>
<td>112</td>
</tr>
<tr>
<td>42.</td>
<td>Head of a child in three-quarter view</td>
<td></td>
<td>112</td>
</tr>
</tbody>
</table>
Introduction

In the summer of 1980 Grazioso Sironi, a researcher for the Archivio di Stato in Milan released previously unknown documents pertaining to the work of Leonardo da Vinci. These documents detailed the Confraternity of the Immaculate Conception’s commission of Leonardo and his assistants Ambrogio and Evangelista de’ Predis. The original contract signed by the artists required a painted central panel along with two corresponding flanking panels for a preexisting sculpted altarpiece. The central painting created by Leonardo was entitled the Virgin of the Rocks. Today, art historians have struggled to explain why two versions of the painting exist and who was responsible for the completion of the second version. The documents revealed by Grazioso Sironi consist of the artist’s contract with the Confraternity, petitions sent from Leonardo and Ambrogio requesting more money for their work and payment records dated from 1507 and 1508. Historians were optimistic that the new documents would provide answers for the many questions regarding the two paintings. Unfortunately Sironi’s revelations only added further complications to an already tumultuous topic.  

Despite historians’ continued debate over the paintings, there are two points they have unanimously agreed upon. Researchers have concluded the version in the Louvre was the first of the two paintings created and it alone can be catalogued as a definitive work of Leonardo. Both of these conclusions were based on a stylistic comparison of the Louvre’s panel to Leonardo’s other paintings dated to the early 1480s. The second version of the Virgin of the Rocks is located in London’s National Gallery and discussed

by former Gallery director Martin Davies in *The Early Italian Schools: National Gallery Catalogue*. Written prior to Sironi’s discovery of the primary documents in 1980, Davies based his theories on the following: scientific research performed by the Gallery, the minimal documentation at that point available regarding the commission and comparative studies of the second *Virgin of the Rocks* to Leonardo and his student’s other works. In *Early Italian Schools*, Davies spoke on the subject of the then existing documents and their inability to determine why there were two paintings and who painted the second panel. He stating, “nothing definite can be deduced from the existence or nature of these documents concerning the origin,” and later added he believed the earlier version of the painting at the Louvre had no connection to the Confraternity’s commission. To Davies, only the National Gallery’s painting could be linked to the 1482 contract binding Leonardo to the Confraternity of the Immaculate Conception. The historian claimed the artistry used in the Louvre’s painting represented Leonardo’s work while he still lived in Florence studying under Verrocchio prior to 1480. Therefore, Davies reasoned the Louvre’s painting was created in 1482 before Leonardo moved to Milan. Therefore, the National Gallery’s version was the only painting involved in the commission. Davies also concluded Leonardo painted the entire second panel, with very little assistance from his students.³ His theories seem to have been an effort to glorify the National Gallery’s painting while dismissing the Louvre’s version. In order for his conclusions to be accurate, the commonality of the paintings would have to have been two large coincidences. The first would have required Leonardo’s Florentine painting to have been the exact size and shape to fit the altarpiece involved in his future commission. The

second coincidence would have required the Confraternity to commission an image of the Virgin’s Immaculate Conception that matched the exact same subject as a painting Leonardo composed one year prior to his move to Milan. The possibility these two events were mere coincidences are very unlikely. Davies’ ability to over-look these occurrences along with his disregard of the available documents regarding the Virgin of the Rocks is astounding. To this author, this shows Davies was only concerned with evidence that reinforced his own theories and what he believed to be beneficial to the National Gallery.

Amazingly enough, Davies’ opinions were convincing to his peers, particularly historians A.E. Popham and fellow former National Gallery director Kenneth Clark. Both men modified their own views on the subject to match Davies. Popham originally believed the Louvre’s painting of the Virgin of the Rocks was part of the Confraternity’s commission but converted to the former National Gallery director’s theories. Oddly enough, two years later Popham began to openly criticize Davies in his writings, such as The Burlington Magazine article, “Reappearance of some Leonardo Drawings.”

The author wrote Davies “tends to underestimate the importance of…” existing documents and refers to Davies’ writing style as, “pedantic…counterbalanced by occasional colloquialisms.” Popham’s transformation from agreeing with Davies to printing personal attacks on the former director is quite surprising. What occurred in the two years that caused the metamorphosis is unfortunately unknown. Kenneth Clark also pandered to Davies’ views regarding the Gallery’s painting but eventually accepted the Louvre’s

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version as part of the Confraternity’s commission.\textsuperscript{6} However, the former Gallery director did refrain from verbally assaulting Davies. This may have been a result of their close working relationship created during their preservation of the National Gallery’s paintings in World War II.

A third art historian who follows a selection of Martin Davies’ theories is Jack Wasserman, author of \textit{Leonardo da Vinci}. Wasserman agrees with Davies that Leonardo painted the earlier \textit{Virgin of the Rocks} while still living in Florence. He based this on the exaggerated mist included in the painting, known to occur in Florence rather than Milan.\textsuperscript{7} However, why Leonardo could not have included the mist after living in Florence and moving to Milan is not mentioned. Wasserman also points out a seam running at the top of the earlier panel, which could indicate the painting was adjusted to fit the \textit{ancona} \textsuperscript{8} in the Confraternity’s chapel. However, the glue used to close the seam would not allow the use of x-rays on the painting, making the theory impossible to prove. Wasserman’s mention of the seam shows he does not agree the National Gallery’s panel was the only painting involved with the Confraternity’s commission. If Wasserman believes the Louvre’s painting was modified to fit in the sculpted altarpiece of the chapel, then it was clearly part of the contract. In his book, the historian wrote the first painting was in the Confraternity’s possession until 1490 when it was replaced by the second panel. Wasserman argued the second painting was started between 1486 and 1490, though it was still incomplete when placed in the chapel. Not until 1508, two years after Leonardo was forced to return to Milan, was the second panel determined to be finished.\textsuperscript{9}

\textsuperscript{8} \textit{Ancona} is the Italian word for sculpted altarpiece.
Wasserman’s theory disregards the painting style of the second panel which coincides with Leonardo’s other work in the early sixteenth-century. If the majority of the National Gallery’s panel was painted between 1486 and 1490 as Wasserman suggested, the style of it would match that of the Louvre’s painting, which it does not.

On the other side of the debate, historians Pietro C. Marani, David Alan Brown and Cecil Gould completely disagree with Martin Davies. Marani detailed his research in his *Leonardo da Vinci: the Complete Paintings*. The scholar was one of two historians present in 1980 for Grazios Sironi’s revelation of the newly-found documents pertaining to the Confraternity’s commission. Marani argued the first *Virgin of the Rocks* was painted between 1483 and 1486 based on a stylistic comparison to Leonardo’s other paintings from the 1480s. Marani placed the second painting’s creation between 1491 and 1495 based on documentary evidence and iconographic analysis. He theorizes the Louvre’s painting never entered the chapel of the Church of the Immaculate Conception because it was sold to another of Leonardo’s patrons prior to 1490. It is likely the other patron was Ludovico Sforza, the Duke of Milan and Leonardo’s employer. This conclusion is based on a petition from 1491 sent by Leonardo and his assistant Ambrogio requesting the Confraternity pay more money for the painted panel. In the letter, the artists implied another interested party had offered a substantial amount of money for the painting and if the Confraternity could not match it, they were going to sell. Although the document states the Confraternity would not succumb to the requested amount, there is no additional documentation revealing the painting’s sale or the identity of the second patron.  

10 Historian David Alan Brown follows the same theories as Marani in his article,

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“The London *Madonna of the Rocks* in Light of Two Milanese Adaptations.” Brown analyzed Fra Antonio da Manza’s miniature *Pentecost* to determine when work on the second *Virgin of the Rocks* began. The details of *Pentecost* are visibly inspired by the second paining pertaining to the commission, leading Brown to conclude Fra Antonio saw the second *Virgin of the Rocks* before initiating work on his miniature. The author used this information along with historical and political details included in *Pentecost* to determine Fra Antonio completed his painting between 1492 and 1503. As Leonardo left Milan in 1499, Brown believed Antonio would have seen the second panel in an incomplete state sometime after 1490. This would have been after Leonardo had applied the underdrawing and sketched additional details onto the second panel.\(^{11}\)

Art historian Cecil Gould follows the same argument proposed by Pietro Marani and was the other man present during Sironi’s presentation of the new documents regarding the *Virgin of the Rocks*. Both scholars agree Leonardo only started the second version but left the majority of the painting process to his pupils.\(^{12}\) Historian Martin Kemp, one of the head researchers for the *Universal Leonardo Project*, also follows Marani’s argument. Kemp focuses on the substitution theory, stating the Louvre’s panel was painted for the Confraternity’s commission but sold to a second buyer, requiring a second painting to fulfill the active contract. Where Kemp varies from Marani, Brown and Gould is his belief that Leonardo painted the second *Virgin of the Rocks* with minimal assistance from his students.\(^{13}\) This idea corresponds with that of Martin Davies

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and is improbable considering the style and quality of the second panel compared to the rest of Leonardo’s oeuvre.

Merging the arguments of Martin Davies and Pietro Marani, art historian William Cannall proposed his ideas in, “Leonardo da Vinci the Virgin of the Rocks: A Reconsideration of the Documents and a New Interpretation,” from the Gazette Des Beaux-Arts. The article was printed in 1984, four years after Sironi released the documents discovered in the Milan Archives. Cannall suggested the first Virgin of the Rocks was started in 1483 and delivered to the Confraternity between 1493 and 1503. It remained in the chapel unfinished until 1506 when Leonardo was forced to return to Milan. As the Confraternity declared the altarpiece finished in 1508, Cannall argued the National Gallery’s painting could not have been the painting with the Confraternity at that time, as it is still incomplete to this day. He concluded the Confraternity would not have settled for an unfinished painting after they had waited for it for over twenty years. Cannall also dismissed the substitution theory based on the lack of evidence supporting it.\(^\text{14}\) What Cannall fails to confirm is how then the National Gallery’s painting was ever placed in the Confraternity’s chapel? And if it never was, why has it continued to be associated with it?

The research published by these historians has opened a dialogue regarding the two Virgin of the Rocks. However, their mixed views provide no concrete answers to the following: why are there two paintings, what happened to the first painting after it was finished, and who painted the second version? Solid answers for these questions will solve a mystery that has continued to baffle Leonardo historians and those confused by

the unequal work of the National Gallery’s painting compared to the rest of Leonardo’s oeuvre. Through use of legal documents, artistic interpretation, curatorial and scientific data as well as general common sense, this paper argues the following: the Virgin of the Rocks, although intended for the Confraternity, was sold by Leonardo to his employer, Ludovico Sforza. The sale forced the artist to initiate work on a second painting, but other commissions such as the Last Supper kept Leonardo from performing the majority of the work. Instead, the master artist delegated the completion of the second painting to his assistants Giovanni Antonio Boltraffio, Marco d’Oggiono and Ambrogio de’ Predis. Unfortunately, without further research to discover additional documents pertaining to the Virgin of the Rocks, these conclusions will continue to be debated. Necessary evidence on the sale of the first painting, the start date for the second version and which painting the Confraternity actually possessed is required to resolve the questions and end debates over the issues. Without this evidence, all conclusions will be based on assumptions formed from existing documents and comparative analysis of the other paintings done by Leonardo and his pupils. The second half of this thesis will review the acquisition of the two Virgin of the Rocks by the Louvre and the National Gallery. The institutions’ conservation practices, exhibitions and precautions taken for collections during World War II will also be discussed. The museum’s scientific research and in-depth examination of their individual paintings have generated invaluable information required to solve the mysteries of the Virgin of the Rocks.
PART I THE HISTORY

Chapter One
Leonardo in Florence

A Brief History of Leonardo da Vinci

Leonardo da Vinci began his career studying under Andrea del Verrocchio in Florence. The young student cultivated a variety of artistic methods while in Verrocchio’s workshop including the applications of brushwork drawing on linen, silverpoint on prepared paper, and pen and ink sketching on paper. Leonardo incorporated these techniques into his early design work but quickly deemed them insufficient for his artistic purposes. The artist needed to develop a style and medium that could accurately capture the realistic motion of life onto a panel or piece of parchment. After 1480, Leonardo began to imitate certain drawing styles of artist Antonio del Pollaiulo. The most prominent of these techniques was the use of a brown wash over simple brushwork on paper and linen. Not until he had lived in Milan for over ten years did Leonardo modify his methods for silverpoint and pen and ink application.15

Leonardo’s drawing progression is evident in two separate studies both in the Royal Collection at Windsor Castle. The first, A study of a horse divided by lines (fig.1) is dated to 1481 to 1482. The second, A study of a horse in profile and from the front (fig.2) is dated to 1490. The drawings are both done in metalpoint on pale blue prepared

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Fig. 1. Study of a horse from the front divided by lines, c.1481-1482. Metalpoint on pale blue prepared paper, 22.2 x 11.1 cm. Windsor, Royal Library (RL 12290). Courtesy of Her Majesty the Queen Elizabeth II.

Fig. 2. Study of a horse in profile and from the front, c. 1490. Metalpoint on pale blue prepared paper, 21.2 x 16.0 cm. Windsor, Royal Library (RL 12321). Courtesy of Her Majesty the Queen Elizabeth II.
paper. A comparative look at the two studies verifies Leonardo’s evolution as an artist in the ten year period. The use of shadow to emphasize the horse’s muscle and tone in the second study creates a level of realism not visible in the earlier drawing.16

**Leonardo and Milan**

Florence was unofficially ruled for the majority of the fifteenth-century by the powerful and extremely wealthy House of Medici; headed by Lorenzo de’ Medici from 1449 to 1492. The Medici influenced and motivated prominent Renaissance artists by commissioning paintings, sculptors and other decorative arts in Florence. As the family had the reputation to be capable of starting or ending an artist’s career, their contract terms were rarely questioned. This allowed them to keep their favorite artists, such as Michelangelo, on retainer for up to ten years. Although the Medici would provide financial compensation for materials preceding the artist’s work, the over-all payment for the commission was not given until it was actually completed and in the Medici’s possession.17 This payment arrangement was adopted by most wealthy groups in Florence, which was unfortunate for Leonardo who had the reputation of not finishing his work in a timely manner or at all. During his nine years under the Company of Saint Luke in Florence, the artist produced little in painting and received minimal fiscal compensation. This was to be expected considering no one would pay him at the beginning of a commission, as he requested. At the age of thirty in 1482, Leonardo left Florence for the city of Milan. The likely incentive for his relocation was lack of financial

gain, although Leonardo’s disappointment over his exclusion from the decoration of the Sistine Chapel may also have influenced his decision. The commission was a lucrative, long-term position offered to his fellow Verrocchio pupils and would have provided him with steady pay. Whatever the reason for his departure, Leonardo was prepared to move ahead and a recommendation from Lorenzo de’ Medici to the Duke of Milan, Ludovico Sforza, presented the artist with the opportunity.\textsuperscript{18}

In the letter to the Duke, Medici described Leonardo as a gifted lute player who was known for his improvisation skills. Oddly, his artistry was not mentioned. After arriving in Milan, Leonardo focused on military engineering and architectural construction, keeping his painting abilities hidden from Ludovico until later in his employment. By initially concealing his artistic talents from the Duke, Leonardo was able to accept painting commissions from other patrons. The secondary income assisted him in fixing his dire financial situation.\textsuperscript{19}

After Ludovico became aware of Leonardo’s artistic talents, he was offered a position as a \textit{stipendi} \textsuperscript{20} in the Milanese court. As the amount of work he produced for the Duke did not influence what he was paid, Leonardo could continue to accept commissions from other clients at his leisure. The casual financial relationship between Leonardo and Ludovico continued until the late 1490s when the Duke fell into his own financial difficulties. In lieu of money, Leonardo was offered an active vineyard outside the city walls as means of payment for his services.\textsuperscript{21} When Milan was invaded by Louis XII in 1499, Ludovico was captured and kept prisoner in France until his death in 1508.

\textsuperscript{18} Pietro C. Marani, \textit{Leonardo da Vinci: the Complete Paintings}, 124-125
\textsuperscript{19} Ibid.
\textsuperscript{20} \textit{Stipendi} were artists handpicked by the Milanese court kept on regular salaries instead of paid per commission or job.
Neither the Duke’s attack nor his demise affected Leonardo’s ownership of the property, which stayed in his possession until his own passing in 1519.\textsuperscript{22}

**Leonardo as an Artist**

After five years of living in Milan, Leonardo dismissed silverpoint and pen and ink for black and red chalk for the composition of his studies. The departure from certain artistic tools has been informative for art historians as it assists in determining the date of his drawings based on the medium and style. Consequently, the change in mediums coincided with Leonardo beginning to extensively record his thoughts and observations on painting and drawing in his now famous manuscripts.\textsuperscript{23} His original manuscript, the *Codex Atlanticus*, was actually begun in 1478. It is the largest of his written works, compiling over 1,700 of the artist’s drawings and entries on various topics. Broken into twelve volumes, *Codex Atlanticus* documents Leonardo’s interests in botany, mathematics, architecture and motion. In a section devoted to flight, Leonardo wrote, “when once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return.”\textsuperscript{24}

A few years prior to the creation of the first *Virgin of the Rocks*, Leonardo composed rules for reaching complete tonal painting through light and shade in his *Manuscript C*.\textsuperscript{25} He aimed to provide three-dimensionality to his forms and create


substantial relief. He did this by painting darkness over light, emphasizing unified shadows, saturating colors in important areas, and highlighting specific boundaries.

These techniques aided Leonardo in creating *chiaroscuro*. Leonardo defined the method:

> The first intention of the painter is to make a flat surface display a body as if modeled and separated from this plane, and he who most surpasses others in this skill deserves most praise. This accomplishment, with which the science of painting is crowned, arises from light and shade, or we may say chiaroscuro.\(^{26}\)

An example of the technique is shown in the blue of the Virgin’s cloak in the Louvre’s *Virgin of the Rocks* (fig.3). Originally the robe was saturated to draw the viewer’s attention to the figure and capture the mood and atmosphere surrounding the group.\(^{27}\)

Unfortunately age and improper conservation have faded the royal blue tones. However, the original color saturation in the master artist’s work was so intense the existing colors still invoke an over-whelming feeling of awe.

Leonardo used a combination of naturalism and idealism to create what Martin Kemp calls a *hypernaturalism*.\(^{28}\) In order to reach this effect in his work, Leonardo would only study and record the highest quality and best examples of his subjects. Even in his grotesques, Leonardo chose the ugliest, most obscene models to draw from. His manuscripts describe the techniques he used to create his “second nature.”\(^{29}\) These included the use of light and shade, edge contrast, aerial perspective, *sfumato*, scaling of objects and foreshortening. In Martin Kemp’s *Leonardo da Vinci: the Marvelous Works of Nature and Man*, the author discusses Leonardo’s fascination with the use of light and


\(^{28}\) Ibid.

\(^{29}\) Ibid.
Fig. 3. *Virgin of the Rocks* (detail of Virgin’s cloak), 1483. Oil on panel transferred to canvas, (first panel) 199 x 122 cm. Paris, Louvre Museum. Museum Photo.

Fig. 4. Close up of Virgin’s cloak clasp (see fig.3.)
luster to create a life-like atmosphere in his paintings. He would achieve this by placing a
darker object next to a lighter object in order to enhance it or what is called edge contrast.
Leonardo would use *sfumato* to compliment light and dark shades in his paintings. This
effect was reached by adding a smoke-like veil over the forms, enriching the darker areas
and maximizing the lighter areas. Using the Louvre’s *Virgin of the Rocks* as an example
of these techniques, Kemp points out Leonardo’s use of light and luster for the Virgin’s
clap on her cloak (fig.4). He also notes the artist’s use of *sfumato* for the shading under
Christ’s chin and neck, the perspective of the Virgin’s outstretched hand and the curved
arch of the Child’s back. Not until the nineteenth-century did another artist reach this
level of visual intensity within their paintings.\(^3\) Leonardo achieved this by
experimenting with light and recording how it affected different forms. He realized dust
and mist made objects seem dull and far away and his subjects changed as he separated
himself further from them. Leonardo used aerial perspective to represent distance in his
work and scaled down his subjects based on their positioning in the painting. Through the
use of light, aerial perspective and color contrast, Leonardo was able to reach the
hypernaturalism style that he desired to achieve for his art earlier in his career.\(^3\)

Prior to the first *Virgin of the Rocks*, Leonardo prepared studies focusing on
depth, shape and lighting effects on the forms he planned to use in the painting. The
Royal Windsor Collection and the *Biblioteca Reale* in Turin have three existing studies
for the initial painting, all centered round the angel Gabriel. They include a preparatory
study for the angel’s head (fig.5), a drawing of his flowing robes while in his kneeling
position (fig. 6) and a study of Gabriel’s hand pointing to Saint John (fig. 7).

Fig. 5. Study for the angel in Virgin of the Rocks (first panel), c. 1480-1483. Metalpoint and brush with white heightening on prepared paper, 18.1 x 15.9 cm. Turin, Biblioteca Reale. Reproduced from Vivante Drawings.

Fig. 6. Drapery of a kneeling figure, c. 1483. Brush and black ink with white heightening on pale blue prepared paper, 21.3 x 15.9 cm. Windsor, Royal Library (RL 12521). Courtesy of Her Majesty the Queen Elizabeth II.

Fig. 7. Copy of Leonardo da Vinci’s A study of a pointed hand for the angel in the Virgin of the Rocks (first panel) c. 1517-1520. Black chalk with white heightening on dark prepared paper, 15.3 x 22.0 cm. Windsor, Royal Library (RL 12520). Courtesy of Her Majesty the Queen Elizabeth II.
By preparing a study first, Leonardo was able to play with light and shade to advance the hypernaturalism in Gabriel’s face, hand and structure of his robe. In addition to the studies, many artists in the fifteenth-century, including Leonardo, used wax casts and clay models to practice techniques that would enhance realism in their work. These models provided them with constant access to life-like forms and figures for their drawing and painting. The concept was most likely introduced to Leonardo by his master Verrocchio. This assumption is based on the figures included in Leonardo’s early Florentine paintings and drawings that closely resemble those in Verrocchio’s own work. Like his studies, the clay models enabled Leonardo to place his figures in certain scenes prior to painting, in order to gauge how light and shadow would be created in specific environments. A clay representation was also ideal if a model was unable to hold a pose for an extended period of time or required an awkward placement. In Giovanni Battista Armenini’s *On the True Precepts of Painting* from 1586, the author stated the use of casts was “an old and praiseworthy custom of excellent painters.” Art historian Michael Kwakkelstein proposed Leonardo created clay models for the Christ Child, Saint John and at the very least, the head of the Virgin Mary for the Louvre’s *Virgin of the Rocks*. In an excerpt from Gian Paolo Lomazzo’s manuscript, *Scrutti sulle arti* from 1584, the author said Leonardo wrote to Ludovico regarding multiple heads he had cast for the Virgin and Christ Child, as well as full-figure wax sculptures of all the figures.

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34 Ibid.
Author Jean Paul Richter translated the short biography *Leonardi Vincii Vita* by humanist Paolo Giovio in which he stated Leonardo “placed modeling as a means of rendering figures in relief on a flat surface before other processes done with brush.” In 1560, Benvenuto Cellini created a list of all the major artists who were known to use sculptures to envision their creations prior to painting and Leonardo was included on the list. This is proven in the discovery of sculpted heads made of wax and clay found in the artist’s studio after his death. The use of these models allowed him to practice drawing figures over and over until he could create them from memory alone. When a painting required a difficult pose or model, such as the children in the *Virgin of the Rocks*, an artist’s ability to draw certain forms from memory was extremely beneficial.

Grazioso Sironi defines the *Leonardeschi* as, “painters who learned from the master’s example and sometimes copied or elaborated his inventions, but who ultimately turned this experience to their own ends.” Included in this group were Leonardo’s pupils Giovanni Antonio Boltraffio, Marco d’Oggiono and second generation follower, artist Giampietrino. Another group, the *Leonardesco*, was compiled of faithful followers who replicated Leonardo’s models and cartoons, executing work based on Leonardo’s intentions. It was these men, particularly Leonardo’s long-time assistant Salai (Gian Giacomo Caprotti di Oreno) who spread Leonardo’s work over Europe and helped give rise to a new generation of Leonardo-enthusiasts. The figures included in the work of

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Leonardo’s pupils were often consistent in form, implying they referenced the same clay models for their paintings. For example, the Christ Child positioned in the Louvre’s *Virgin of the Rocks* was reproduced in multiple paintings created by Leonardo’s students. The common form shows Christ in profile to the left with legs crossed; His upper leg rests on His other foot, right hand raised in a gesture, left hand on the ground to keep balance and His head inclined to the left. This position is shown, although modified in small ways, by Giovanni Antonio Boltraffio in his *Madonna and Child* and *Madonna and Child with Saints John the Baptist and Sebastian and Two Donors* (figs. 8 & 9), both painted in the 1500s. It is seen again in Giampietrino’s *The Virgin Nursing the Child and Saint John in Adoration*, also from the early 1500s (fig. 10).

Leonardo’s pupils most likely created their studies of the Virgin and Saint John by using clay models crafted by their teacher. The majority of the students’ paintings that include the Virgin show her with the same head shape and similar facial expressions. Often, the only liberties taken by Leonardo’s pupils were the angles the Virgin’s head was positioned at, seen in Boltraffio’s *Madonna and Child*. The painting depicts the Virgin with a face fuller than Leonardo’s Virgin however the body is almost identical to the original figure. Leonardo’s use of clay models assisted his students in developing artistic techniques and aided his own search for realism. The ability to memorize positioning, lighting, shadows, lines, and depth of figures allowed him to approximate the three-dimensional effects he saw in his life and transfer them to his work; creating his new form of hypernaturalism.42

**Fig. 8.** (top left) Giovanni Antonio Boltraffio, *Madonna and Child*, c. 1500. Oil on panel, 83 x 63.5 cm. Budapest, Museum of Fine Arts. Reproduced from Wikimedia Commons.

**Fig. 9.** (left) Giovanni Antonio Boltraffio, *Madonna and Child with Saints John the Baptist and Sebastian and Donor*, c. 1500. Oil on wood, 186 x 184 cm. Paris, Louvre Museum. Museum Photo.

**Fig. 10.** (top right) Giampietrino, *The Virgin Nursing the Child with Saint John the Baptist in Adoration*, c. 1500-1520. Oil on canvas, 86 x 88 cm. Sao Paulo, Sao Paulo Museum of Art. Reproduced from Wikimedia Commons.
Leonardo and Science

Leonardo believed water was the element in nature that most influenced human life. He researched how the property affected other aspects of life and documented his findings in his manuscript, the *Codex Leicester*. The text outlines seven-hundred and thirty conclusions regarding water and its properties and details Leonardo’s thoughts on geology, hydrology, and the effects of water and air on the Earth. He also recorded his examinations of mountains, rock formations, fossils embedded into stone and air. Leonardo’s written observations of nature in his *Manuscript F* details his views on the power of water.

Moving water strives to maintain the course pursuant to the power which occasions it, and if it finds an obstacle in its path it completes the span of the course it has commenced by circular and revolving motion.

Although these manuscripts have only recently been made available to the public, Leonardo’s paintings have always expressed his fascination with nature. Their accurate and beautiful portrayals of his surroundings visually provide the knowledge Leonardo gained through his experiments and experiences with water and other Earthly elements.

Historian Martin Kemp’s biography *Leonardo* revealed the artist planned to compose a book solely on water, consisting of fifteen subchapters: water itself, water of the sea, water in underground channels, rivers, nature of the depths, objects or flow, gravels, surface of water, things that move in water, means of renovating water or conduits, canals, machines turned by water, how to make water ascend and things consumed by water. Leonardo’s interests were amplified through his love of the spiraling

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vortex, the largest of which was created by water. The mechanics and phenomenal motion created by a vortex were incorporated by Leonardo into various aspects of his paintings. Twirling hair, flowing garments, blowing winds and rippling aquatic forms are captured in his painted work, creating movement within natural environments.\textsuperscript{45}

Analyzing the Louvre’s \textit{Virgin of the Rocks}, these specific elements are evident in the waving of the Virgin’s hair, the movement in her cloak, and the motion of the watery abyss in the background. In order to properly represent action in his work, Leonardo softly outlined his cartoons in black chalk, went over the lines in ink and highlighted the lines with a sepia brush wash. These details further increased and defined the appearance of movement and motion within his paintings and drawings.\textsuperscript{46}

Water was not the only element in nature Leonardo studied with verve. His interest in science and desire to gain knowledge through experience and research led to animal and human autopsies.\textsuperscript{47} Leonardo’s experimentation on the human form was disapproved of by the Catholic Church. It was seen as disrespectful to the dead and to God who created the body. Despite their condemnation, Leonardo continued to perform the dissections to enhance his understanding of the human body. As a scientist, Leonardo saw the human form as a smaller, compact version of the Earth and the Universe. The elements in space and our world that allowed life to process were existent in our own bodies, but miniaturized.\textsuperscript{48} In his \textit{Manuscript K} \textsuperscript{49} Leonardo described the process of performing one full human autopsy, along with multiple dissections of singular body

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\textsuperscript{46} Martin Kemp, \textit{Leonardo}, 76.


\textsuperscript{48} Ibid.

parts. He also examined animal cadavers for specific internal studies but these were more for scientific curiosity rather than an artistic purpose.\textsuperscript{50}

\textsuperscript{50} Martin Kemp, \textit{Leonardo}, 76.
Chapter Two
The Church, the Confraternity and the Commission

The Church of the Immaculate Conception

In 1482 Leonardo left Florence for Milan in order to work for Ludovico Sforza, the Duke of the same city. The artist was granted a salaried position with the Duke, which allowed him to take commissions for other patrons. The first client to enlist Leonardo for his artistic ingenuity was the Confraternity of the Church of the Immaculate Conception. The religious group required three paintings to fill an altarpiece newly installed in a chapel dedicated to the Immaculate Conception within the Church of San Francesco Grande. The Confraternity intended the panels to depict the Virgin Mary as a vessel devoid of sin. The group wanted their public unveiling of the altarpiece to be the same day as the Feast of the Immaculate Conception on December 8, 1484.51

The Church of San Francesco Grande was the first dedicated to Saint Francis in Milan and the largest and most important structure in the city prior to the construction of the Cathedral52 in the fourteenth-century. San Francesco Grande became the prime visiting spot for the aristocrats of Milan and was quickly modified after its initial construction in 1233 to allow elaborate tombs to be placed in the interior. The same year the Church was annexed to the Early Christian basilicas of Saint Navorre and Saint Felice, both martyred in 290 A.D. The Church became a prominent location for funeral venerations and dedications soon after its initial architectural completion.53

52 The Cathedral or Duomo di Milano is dedicated to Santa Maria Nascente and holds the throne for the Archbishop of Milan.
San Francesco Grande was home to the largest collection of saint’s relics and located in Milan’s most ancient and illustrious district. The entire structure, including the surrounding forests and gardens, were consecrated to Christ and every saint for over 1,500 years. The sick and elderly would travel across Europe to pray at San Francesco Grande in the hope their afflictions and sufferings would end. The Church’s appellation as a holy destination was influenced by the many graves marked for saints on the property. Inside the Church, visiting patrons continuously prayed to the large collection of holy relics such as Saint Barnabas’s ashes, the bodies of Saint Desiderio and a massacred innocent and the heads of Saint Matthew the Apostle, Saint Odelia, Saint Ursula and one of the Maccabees. The collection also held a bit of wood from the True Cross and another from a room Christ once ate in. There were also relics from Saint Francis, a tooth of San Lorenzo, and the bones of Mary Magdalene, Santa Romana, Saint Sylvester, and Pope Sixtus I.

The Church honored Saint Francis of Assisi who founded the Franciscan Order. The Franciscans believe the Virgin Mary was born without original sin ever tainting her soul. The Dominicans, founded by Saint Dominic, believe the Virgin was conceived with sin, but it was removed by the Holy Spirit while she was still in her mother’s womb. This view is the same attributed to the sanctity of Saint John the Baptist. The controversy over these clashing religious beliefs resulted in the creation of the Confraternity of the Immaculate Conception in 1475. During the Lenten period of the same year,

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56 In Catholic Dogma, Saint John the Baptist was consummated with original sin on his soul, but was washed clean of it by the Holy Spirit when he was still inside his mother, Saint Elizabeth’s, womb.
57 Joanne Snow-Smith, “An Iconographic Interpretation of Leonardo’s Virgin of the Rocks (Louvre),” 134.
Franciscan Minor Stefano da Oleggio regularly preached the ideology of the Immaculate Conception and undertook developments for the construction of a new chapel and altar devoted to the group’s Marian dogma. Fra Oleggio’s enthusiastic lectures and the increased acceptance of the Franciscan’s view on the Virgin’s untainted inception assisted in the Church’s additions. The chapel also acted as a central station for the Confraternity, a lay organization of the Franciscan Minors. The new architecture may have been an attempt to counter accusations by the Vicar of the Dominicans, Vincenzo Bandelli, who claimed the Franciscan document of the Virgin’s Immaculate Conception was heretical and diabolical dogma. Either to create a distraction from the opposition or merely to spite it, the Confraternity was approved as a new order and legally defined on June 1, 1478. The construction of the Church’s addition was completed by May in the following year.

After Leonardo’s death, the sculpted altarpiece and the chapel of the Church of San Francesco Grande remained a place of worship in Milan. In 1576 a group of Milanese citizens continuously made intercessions to Leonardo’s paintings in the hope of avoiding the plague. Later in the same year the chapel was demolished and the altarpiece was transferred to an unknown location within the Church. In 1781 the Confraternity of the Immaculate Conception was dissolved and their possessions, including the carved altarpiece and painted panels, were inherited by the Hospital of Santa Caterina alla Ruota.

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During the height of the Catholic Reformation movement in 1576, a notary, Giacomo Filippo Besta, was the first to refer to the *ancona* in the Church of *San Francesco Grande*. Besta stated the chapel’s development was the work of Azzo Visconti, the Lord of Milan whose position was later usurped by Ludovico Sforza. Visconti had arranged for the Franciscan Minor’s celebration of the Virgin to be included in the Catholic Divine Offices or daily prayers.\(^6^3\) He believed the *ancona* and its surrounding chapel were meant to be praised by the followers of the Confraternity and the Milanese community. This was to occur every year on the Feast of the Virgin in order to worship the holy mother and the beauty created in her memory. In 1854 Pope Pius IX passed a new rule regarding Marian dogma and its practice in the Catholic Church. Following a doctrine written by a Franciscan doctor at Oxford, the Venerable John Duns Scotus, the Church took a stance on the conception of the Virgin. They declared the holy mother *would* have been born with original sin if Christ had not prevented it but He required her to be completely perfect in order to give Him life.\(^6^4\) Scotus’ doctrine was an attempt to reconcile the Franciscan and Dominican churches. The new doctrine gained popularity with most religious sects except the Dominicans who continued to vigorously deny any idea on the subject other than their own.\(^6^5\)

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\(^6^3\) Claire Farago, “Aesthetics before Art: Leonardo through the Looking Glass,” 55-56.


\(^6^5\) Joanne Snow-Smith, “An Iconographic Interpretation of Leonardo’s *Virgin of the Rocks* (Louvre),” 38.
Giacomo del Maino's *Ancona*

On April 8, 1480 Giacomo del Maino was hired by the Confraternity to carve an elaborate sculpted altarpiece praising the Virgin Mary. Giacomo’s contract stated he was to work from a previously made design created by three other scholars or members of the Confraternity. The *ancona* was comprised of various low reliefs and sculptures surrounding a large empty center and two smaller, rectangular flanking panels. The Confraternity requested the altarpiece be completed by September 29, 1480. This date was missed by almost two years indicated by the final payment to Giacomo on August 7, 1482.66

Every aspect of the chapel’s interior coordinated with the highly anticipated altarpiece dedicated to the Virgin. Reverend Father Augustino dei Ferrari provided the busy artists and workers with specific instructions on the decoration of the chapel. The interior design matched the theme of the *ancona*, dedicated to the *Coronation of the Virgin*, a favorite scene of the Franciscans. The *Coronation* was adopted by the Brotherhood to represent the Doctrine of the Immaculate Conception. The visual representation of the scene showed the Virgin Mary surrounded by the *Triune God* or God the Father, Jesus and the Holy Spirit, conjoined into one figure. Reverend Ferrari was extremely specific in his vision, allowing no interpretation on color, size and shape. The tiburium67 was to be painted blue and include gilt or golden ribs. The moldings on the chapel walls were to be carved into individual Seraphim and painted red. The top corners were to have four large circles filled with painted animals outlined in gold, each

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67 Low dome shape attached to the ceiling reliant on vertical supports.
representing the different personalities of the Four Evangelists. A cupola\textsuperscript{68} covered in golden stars looked down on the altar and in its center was the image of God the Father, painted with gold \textit{sgraffito} \textsuperscript{69} He also wore an ultramarine cloak decorated in gold and surrounded by golden \textit{mandorlas}.\textsuperscript{70} The chapel doors had white molding, painted with golden flowers. Small beads were collected together to form cornices, which were bordered with gold on a blue field. The friezes and recessed panels were also white but touched with a small amount of gold.\textsuperscript{71} The upper register of the carved altarpiece was decorated with the image of the Virgin and God the Father, surrounded by angels. The Virgin was to be painted in an ultramarine and gold and green-gold lined cloak. This was worn over a crimson, loose-fitting gown also detailed in gold. The angels surrounding the Virgin were decorated also with gold and dressed in Greek-style garments. God the Father, placed near the Virgin, was wrapped in an ultramarine cloak and surrounded by Seraphim, painted in a heavy reddish mineral known as cinnabar.

The Confraternity’s ornament list called for mountains and rocks to be included in the scene, possibly a reference to the rocky location of Christ’s birth. This followed the Franciscan’s adaptation of the \textit{Coronation} story’s iconography as their pictorial representation for the Immaculate Conception. The ancona also incorporated scenes from the life of the Virgin in rectangular panels, placed to the right and left of the central carved composition. Each rectangle was composed with small figures sculpted in low relief and painted over in oil. The life-like images showed scenes relating to the doctrine

\textsuperscript{68} Small cup-like structure
\textsuperscript{69} An effect obtained by painting two colors on one surface. After the first color dried, the second was applied. While still wet, the top layer would be scratched off in the desired forms, revealing the color below. Gold was the first color used in the chapel’s cupola making God look to be made of gold.
\textsuperscript{70} An ancient symbol made of two circles coming together.
of the Immaculate Conception, such as the Annunciation of Saint Anne, the Meeting at the Golden Gate of Saint Anne and Saint Elizabeth, the Nativity of the Virgin and the Annunciation of the Virgin.\textsuperscript{72} No documentation exists to prove if Reverend Ferrari’s instructions were completed or if the Confraternity dismissed the extensive decorative ideas for something less complex, as not to distract from their anticipated painted ancona.\textsuperscript{73}

On August 7, 1482, Giacomo del Maino delivered his finished carved altarpiece to the Confraternity, but it was not alone. A document recording the event states the artist produced an image, possibly a sculpture, of the Virgin as a gift to the Franciscans, free of charge. The document refers to the piece as “our lady in the middle”\textsuperscript{74} and details the Virgin’s robes as painted in gold with ultramarine highlights simulating brocade. The Confraternity had drafted a list of the design elements required for the completion of the chapel and Giacomo’s gift was on it. The list of ornaments or lista de li ornamenti se anno a fare a lancona was composed on April 25, 1483, coinciding with the date Leonardo signed the contract binding him to the commission.\textsuperscript{75} On July 28, 1482, ten days prior to the inspection of Giacomo’s altarpiece, an artist or jeweler named Innocenzo della Croce was commissioned by the Confraternity. Croce was to craft a “necklace made of gold with black enameled letters and fourteen pearls,”\textsuperscript{76} to be attached to the neck of a Virgin figure referred to as “then being made.”\textsuperscript{77} The necklace was delivered to the Confraternity on November 22, 1482. It was detailed with fourteen solid

\textsuperscript{72} Joanne Snow-Smith, “An Iconographic Interpretation of Leonardo’s Virgin of the Rocks (Louvre),” 135.
\textsuperscript{73} Pietro C. Marani, Leonardo da Vinci: the Complete Paintings, 128.
\textsuperscript{74} Hannelore Glasser, Artists Contracts of the Early Renaissance, 325-327.
\textsuperscript{76} Hannelore Glasser, Artists Contracts of the Early Renaissance, 325-327.
\textsuperscript{77} Pietro C. Marani, Leonardo da Vinci: the Complete Paintings, 142.
gold flowers and an equal number of pearls. Letters were inlaid between the adornments spelling out the name of the Immaculate Virgin in Latin. Because the document addressing the necklace was written ten days before Giacomo arrived with his surprise sculpture, it would be improbable the necklace was intended to adorn the sculpture’s neck. In *Leonardo da Vinci: the Complete Paintings*, Pietro Marani noted the second painting of the *Virgin of the Rocks* has two holes on either side of the Virgin’s neck, both filled in with modern style paint. Further, the list indicated Giacomo’s sculpture was to be placed atop the altarpiece, ranging too high to properly showcase the necklace.78 These details help to determine the necklace was placed on the National Gallery’s painting, as it was the version that actually hung in the chapel of the Church of *San Francesco Grande*.

Leonardo’s painted panels completed the Confraternity’s vision, filling the lower register of the altarpiece.79 Although Giacomo’s carved piece was later destroyed, his son Angelo del Maino reproduced a similar *ancona* providing a glimpse at what the original creation would have looked like. The polychrome wood work was done between 1516 and 1526, built to hold the fresco *Madonna and Child* by artist Gaudenzio Ferrari who produced the painting significantly earlier in 1450 (fig.11).80

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79 Ibid., 129.
Leonardo’s Commission

On April 25, 1483 the Confraternity of the Immaculate Conception commissioned Leonardo and his assistants, half-brothers Evangelista and Ambrogio Predis, to paint the central and side panels of the Church’s ancona. In addition to the panels, their contract required them to gild and paint the sculpted altarpiece. This task was assigned to Evangelista, leaving the execution of the three paintings to Leonardo and Ambrogio. The Confraternity required the central panel to match the theme of the chapel, devotion to the Virgin and the story of the Immaculate Conception. They expected an image of the Christ Child with two unnamed prophets, suggested by historian Joanne Snow-Smith to have been Isaiah, the prophet of Nativity and Ezekiel whose image is a well-known symbol of
the Immaculate Conception. The two flanking panels were to depict eight angels total, four in each, all unique in style and singing or playing musical instruments.

The artist’s contract affirmed they would split a payment of eight-hundred lire or two scudi for the entirety of the work. That included the painting of the panels along with the exterior decoration of the altar and its carvings. Over the next two years, payments from the Confraternity were made regularly in monthly installments of forty lire. The contract stated Leonardo was to have the altarpiece completed within seven months. Until quite recently it has been assumed the commission was considered incomplete for over twenty-five years. However, a document dated to December 29, 1494 found by Grazioso Sironi in the Milanese State Archives in 1999, states Leonardo’s central and side panels were complete and the artists were paid in full. This author concludes the Louvre’s painting was finished in 1484 and the first payment of eight-hundred lire had been dispensed. If the artists were to receive eight-hundred lire total and forty lire were distributed per month, the payments would have lasted twenty months. The time elapsed from the signing of the contract on April 25, 1483 to the document declaring the work was complete on December 29, 1484 was twenty months. It is likely the completed painting referred to in the document discovered in 1999 was the Louvre’s painting. Leonardo had informed the Confraternity the painting was almost finished, which they noted in documentation. But financial disagreements began between the artists and the Confraternity, forcing Leonardo to use the painting as leverage to obtain more money.

When the Confraternity refused to provide further monetary compensation, Leonardo

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81 Joanne Snow-Smith, “An Iconographic Interpretation of Leonardo’s Virgin of the Rocks (Louvre),” 47.
sold the initial panel to another patron. He then retracted his submission to the Franciscans regarding the painting’s finished status, claiming more work was required. This meant the Church never saw the first Virgin of the Rocks and the two parties’ ongoing financial disputes continued for over twenty-five years.

**Legal Issues**

Evangelista de’ Predis died between 1491 and 1493, leaving his brother Ambrogio and Leonardo with the task of completing the Confraternity’s commission. Shortly after Evangelista’s death, the two remaining artists plead to the Franciscans for increase in payment for their work. They sent a petition to Ludovico Sforza asking for him to interfere in the matter sometime between 1491 and 1494. It was after 1491 because it did not include Evangelista’s signature due to his passing, but before 1494 because it was addressed to the Duke of Bari. This was Ludovico’s title prior to becoming the Duke of Milan in 1494. The petition claimed the painting was valued at one-hundred ducats and another interested party had offered this amount to purchase the Virgin of the Rocks. Leonardo and Ambrogio believed the eight-hundred lire already paid by the Confraternity was only sufficient for the painting and gilding of the exterior of the sculpted altarpiece and not nearly sufficient for the painted central and side panels. Prior to sending the petition and involving the Duke, the artists addressed the Confraternity personally to request the monetary increase. The Confraternity offered the artists an additional twenty-five ducats, which Leonardo rejected. He then sent Ludovico a copy

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84 One lire was equivalent to six Venetian ducats
of the petition, demanding the Franciscans pay an additional one-hundred ducats or they would never receive their paintings.\(^85\)

Unfortunately no existing documentation exists regarding the outcome of the petition. However the paperwork itself provides information pertaining to the completion and eventual ownership of the first Virgin of the Rocks. If Leonardo was asking for one-hundred additional ducats for the central and side panels, they must have been complete at that point in time. He would only be able to determine their worth as well as the cost of labor put into them if the works were finished or close to it. Also, if a second party offered the artist one-hundred ducats to purchase the paintings, Leonardo would have been obliged to show the new client a close-to completed work so they could make such an offer. Therefore, the panel must have been essentially finished and in the possession of Leonardo or his workshop for the interested party to view it. Leonardo stated in his petition to Ludovico the panels would not be delivered to the Confraternity if he was not paid the additional amount requested. This clearly shows the Confraternity did not have or ever had possession of the first Virgin of the Rocks.

After the sale of the first painting in 1484, a second version was started to fulfill the original commission. In 1499 Leonardo left Milan to return to his home in Florence. At that time the second panel was delivered to the Confraternity, leaving the contract open with no additional payments made to the artists. On behalf of himself and then deceased brother Evangelista, Ambrogio sent an appeal to Louis XII in 1503 that requested further payment for both brother’s completed portions of the work. If the financial compensation was not met, he demanded the panel be returned to the artist’s

\(^{85}\) Hannelore Glasser, Artists Contracts of the Early Renaissance, 19.
workshop. Both the requests were denied and the panel stayed in the chapel.\textsuperscript{86} Shortly after the assistant’s appeal, Leonardo was served in Florence with a summons for his immediate return to Milan. On April 4, 1506 two arbiters were appointed to see the state of the altarpiece with their own eyes and ruled Leonardo was legally obligated to finish it, stating “well and diligently the aforementioned panel or altarpiece on which is portrayed the image of the most glorious Virgin Mary and this must be completed within the next two years by the hand of the said master Leonardo.”\textsuperscript{87} Upon his arrival in Milan, Leonardo requested an additional four-hundred lire to complete the remaining work on the panel but was only granted two-hundred by the Confraternity.\textsuperscript{88}

Assuming the first painting was sold to the artist’s other interested party in 1494 for the sum of one-hundred ducats, the second painting was begun in the same year and continued to be worked on by Leonardo’s pupils until 1506 when the master artist was forced to return to Milan. After his summons, Leonardo once again obtained the panel and continued to work with his assistants until 1508 when the painting was determined complete by the Confraternity’s arbiters. The aforementioned additional two-hundred lire was given to Ambrogio acting on behalf of Leonardo, in two installments on August 26, 1507 and October 23, 1508. The painting was then redelivered by Leonardo to the Confraternity on August 18, 1508. Two crucial documents regarding the Virgin of the Rocks are dated a few weeks prior to the delivery, on August 3, 1508. The first document states Leonardo had no further claims against the Confraternity provided his assistant was allowed to remove the central panel from the ancona and place it in a separate room for

\textsuperscript{86}Jack Wasserman, Leonardo da Vinci, 80.
\textsuperscript{87}Martin Kemp, Leonardo da Vinci: the Marvelous Works of Nature and Man, 93.
him to reproduce. The second document written by Ambrogio de’ Predis, requested he be able to make his own copy of the central panel to sell to an unknown patron. He was granted permission to do so in a location provided by the Confraternity’s scholars only if the work were done under the supervision of Leonardo and the assistant shared any profits made from the sale of the reproduction with his teacher. Both documents refer to the same copy made by Ambrogio.

Chapter Three
The Mystery of the Two Paintings

The Purchase of the First Virgin of the Rocks

Historians have had difficulties determining why two paintings of the Virgin of the Rocks (fig. 12) were painted, who was responsible for the second painting and what happened to the initial painting after 1483. A representative from the Louvre Museum reported the institution had no final position on the origin of their painting. Along with no documentation pertaining to the where-about of the first panel prior to the seventeenth-century, researchers have been forced to hypothesize and speculate on the location of the painting through the use of coinciding historical information. The earliest document was written by Italian scholar Cassiano dal Pozzo after he saw the Louvre’s Virgin of the Rocks at the Chateau Fontainebleau in France in 1625. It is this author’s belief the first panel was sold by Leonardo to the aforementioned second patron, Ludovico Sforza, beginning the painting’s journey to Fontainebleau. Ludovico was informed of Leonardo’s monetary disputes with the Brotherhood when he received the artist’s petition to gain further financial compensation for the panel. The petition also informed the Duke that Leonardo was still in possession of the panel, as the artist threatened to keep the painting if the Confraternity did not oblige to their monetary requests. Ludovico took advantage of the dispute and purchased the work for himself. At that time, it is likely the first painting was close to being finished but was technically in an incomplete state. As Ludovico was Leonardo’s employer, he was the only person with

91 Vincent Delieuvin, Curator at Louvre, e-mail to author, September 8, 2010.
Fig. 12. *Virgin of the Rocks*, 1483. Oil on panel transferred to canvas, (first panel) 199 x 122 cm. Paris, Louvre Museum. Museum Photo.
the power to force the often tardy artist to complete a work of art on time or at all. He also took precedence over Leonardo’s other commissioners. This meant if Ludovico wanted the *Virgin of the Rocks*, the artist was required to give it to him.

The Duke intended the painting to be a wedding present for his niece, Bianca Marie Sforza, who was engaged to Emperor Maximilian I. The Emperor was born into the House of Habsburg, a royal family that began its reign in Germany but gained significant power by wedding women from other royal families across Europe. Maximilian was previously wed to Mary of Burgundy, which granted him rule over the Netherlands, Luxemburg and other areas of Western Europe. This led to his title as the Archduke of Austria and the unofficial King of the Romans. Mary of Burgundy reached an untimely death in 1482. Only one year later, Maximilian wed Bianca and received a hefty dowry and the title *Imperial Overlord of Milan* from Ludovico. The marriage between the Emperor and Bianca took place on March 16, 1494.93 Author Francesco Malaguzzi-Valeri’s *The Court of Ludovico il Moro*94 includes a report dated December 7, 1493 written by Ludovico’s ducal secretary, Gualtiero. In it, Gualtiero stated several drawings and a painting described as a *maesta*, were gifted to the then engaged couple by Ludovico. The *maesta* was to be taken to *Castello* in Milan by Ambrogio de’ Predis, where he was to pack the painting for travel and accompany it along with Bianca Maria’s bridal train.95 The use of the word *maesta* in the report has caused concern for researchers as the subject of the *Virgin of the Rocks* is not a standard *maesta* scene. A *maesta* often depicts the Virgin enthroned with the Christ Child in her lap. However, Malaguzzi-Valeri
translated the word *maesta* in her book as “a sacred effigy of Jesus or of the Madonna,” not necessarily the Virgin on a throne with her Son in her arms.\(^\text{96}\) In addition to this, sixteenth-century artist and historian Giorgio Vasari described the painting gifted to the newly-wed couple as a *nativity*, which better suits the *Virgin of the Rocks*.\(^\text{97}\) Gualtiero’s report in *The Court of Ludovico il Moro* stated Ambrogio was to accompany Bianca Sforza to Innsbruck in Austria where he would remain for some time in the service of the Emperor. It was not uncommon for an artist to accompany one of their paintings while en route if it still required work to be considered complete. However, Ambrogio was known as a portraitist and the painting in question was described as a *maesta* or nativity. Ambrogio did not possess the skills to create the non-portrait style painting he accompanied on Bianca’s bridal train. It is likely the assistant was sent to apply the final details for an almost-finished painting created by Leonardo. The master artist’s short attention span kept him from maintaining interest in one painting for an extended period of time. It also deterred him from escorting Bianca on the long journey to Innsbruck. This forced Ambrogio to act as travel companion to Ludovico’s niece while applying the finishing touches to an extravagant wedding present. The connection between Vasari’s account of Ludovico gifting a nativity painting to Bianca, Gualtiero’s report of Ludovico giving his niece a *maesta* panel after purchasing a painting from Leonardo and Ambrogio’s accompaniment of Bianca and an unfinished painting from his own workshop provide an answer to what happened to the initial *Virgin of the Rocks*. The first painting was sold by Leonardo to the Duke of Milan who paid more money for it than the Confraternity was willing offer. Ludovico then gave the painting to his niece Bianca for


her wedding and Ambrogio was sent by Leonardo to accompany the work and finish any necessary details. Unfortunately, the purchase of the initial painting by the Duke meant the artists had to produce a second version to fulfill the open commission from the Confraternity.98

In 1570 Archduke of Tirol Ferdinand II travelled to Speyer to act as wedding proxy for King Charles IX of France. The King wed Ferdinand’s niece, Elisabeth of Austria on November 26, 1570. The Archduke was a passionate collector of aristocratic portraits and continuously looked for opportunities to further his collection. His acquired paintings are on display at Ambras Castle in Innsbruck and features over two-hundred portraits originally owned by the House of Habsburg.99 The Castle is also home to over three-hundred paintings purchased or inherited by Ferdinand II from King Albrecht II, Charles V, Ferdinand I and most importantly Emperor Maximilian I. The Archduke inherited the fellow House of Habsburg’s art collection which included the first *Virgin of the Rocks*.100

Ambras Castle currently contains a portrait of King Charles IX painted by the artist Francois Clouet. It is speculated shortly after the wedding of Charles IX and Ferdinand’s niece Elisabeth, the Duke returned to Tirol in Austria with the Clouet. The newly acquired portrait was exchanged for the first *Virgin of the Rocks*, where it was returned to France with Charles who entered it into the King’s Royal Collection at the Louvre Palace. There is no documentation to prove this theory however the coincidences are impossible to ignore. The combination of Ferdinand’s involvement in the wedding of

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99 Ibid.
his niece to Charles IX, his desire to collect portraits featuring his nieces’ new husband, and the appeal of forming a trade with a powerful man who may possibly benefit him as an ally, would suggest the exchange of paintings was a deliberate plan concocted by Ferdinand II in the interest of his expanding his already large art collection.\textsuperscript{101}

**Conflicting Theories**

As no documentation exists regarding the location of the first *Virgin of the Rocks* prior to 1625, historians have suggested varied theories on the Louvre’s acquisition of the panel. Historians Jack Wasserman, Sylvie Beguin and Carlo Vecce believe the painting was taken as spoils of war by King Louis XII when he withdrew from Milan in 1499.\textsuperscript{102} In a previous exhibition featuring the painting, the Louvre stated it was acquired by Louis XII, predecessor to Francois I, while in Italy.\textsuperscript{103} However, there is documentation to endorse these claims and it is likely the painting had left Italy by 1499 when Louis XII came to power. A document dated 1507 recalls that King Louis was unaware of Leonardo’s work until the same year, when he was quoted expressing his excitement about the artist.\textsuperscript{104}

The contract and legal documents regarding the commission of the *Virgin of the Rocks* sets the beginning and end dates for the two paintings from 1483 to 1508. However, the actual end date of the first panel and beginning date of the second painting are not included. Art historian Cecil Gould argues the initial painting was finished shortly after its inception in 1483 and then sold to Ludovico. Gould attributes the majority of the

\textsuperscript{101} Cecil Gould, “The Early History of Leonardo’s *Vierge aux Rochers* in the Louvre,” 220.
\textsuperscript{103} Vincent Delieuvin, e-mail to author.
\textsuperscript{104} Cecil Gould, “The Early History of Leonardo’s *Vierge aux Rochers* in the Louvre,” 220.
second painting to Leonardo’s pupils based on their teacher’s lack of interest in working on the same painting he had completed only a year prior. He concludes the second painting was almost finished in 1499 when Leonardo left Milan but prior to his departure, the artist gave the still incomplete panel to the Church. This was necessary as the Confraternity legally owned the painting since they had already paid four-hundred lire to the artists fourteen years prior.\footnote{Cecil Gould, “The Newly-Discovered Documents Concerning Leonardo’s Virgin of the Rocks and their Bearing on the Problem of the Two Paintings,” 74.}

An opposing view proposed by historian William Cannall is based on the lack of evidence proving the sale of the first painting to anyone other than the Confraternity. Cannall believes any theory regarding the painting’s sale to a second party is the result of misinterpretation and exaggeration of existing documents. The historian has focused his conclusions on Ambrogio’s appeal in 1503 when he demanded further payment for the work he and his brother had already completed. If he did not receive the additional sums, he demanded the ancona be returned to Leonardo’s studio. The pupil’s monetary request was rejected and the panel was not returned. Cannall states there is no existing evidence to prove a switch in paintings occurred prior to this, concluding the painting hanging in the Franciscan’s chapel in 1503 was still the first Virgin of the Rocks. The historian placed the completion of the Louvre’s panel to 1483 and the delivery to the Confraternity between 1493 and 1503. It remained in an almost complete state until 1506, when Leonardo returned to Milan. According to Cannall, the central panel was then replaced to the knowledge of the Confraternity by an entirely different third painting. That painting was eventually lost along with any documents proving its existence. Cannall’s argument for the existence of a third painting is based on the Confraternity’s inability to accept the
unfinished second painting as the final commissioned work. The Church’s insistence on Leonardo personally completing their commission and the length of time it took for the work to be finished led to Cannall’s argument; there would have been no way the Confraternity would have settled for an unfinished panel. Therefore a third finished painting must have existed and it was that version the artists provided to the Confraternity at the end of the contract.\textsuperscript{106}

Clearly William Cannall’s theories hold little validity. He fails to explain why the first panel was removed from the Church when Leonardo returned from Florence and then replaced by the third mystery painting. Leonardo began initial work on the second \textit{Virgin of the Rocks} in 1493, and relinquished the majority of the painting to his pupils who continued to work on it until 1499 when Leonardo left Milan for Florence. Prior to his departure, Leonardo may have resigned the incomplete panel to the Confraternity as Cecil Gould suggested, but the Church allowed the pupils to continue to work on the altarpiece while it resided in the chapel. As the \textit{ancona} was still incomplete seven years later, the Confraternity realized without Leonardo present, they may never have a completed work. This forced them to take legal action. In 1506 Leonardo was required by law to return to Milan where he finished out the contract to the Confraternity’s approval. William Cannall identified the lack of documentation regarding a switch of the first and second panels, however, that does not mean it never happened. It only proves the Confraternity would not have been aware of it. His \textit{third painting theory} based on the Confraternity’s unlikely acceptance of an incomplete painting seems unlikely. His

allegations can only be explained by the documentation of 1508 in which Ambrogio made a copy of the existing painting already in the chapel. Why the Confraternity would have accepted the work of the assistant in place of the real master is unexplained. It seems particularly odd since they were so adamant that the painting be completed by Leonardo himself, which is why they forced him to return in 1506. The Confraternity’s acceptance of an incomplete panel could be feasible based on the degree of the unfinished work along with the discerning eye of the arbiter sent to analyze the painting. The unfinished elements of the second panel are not obvious without a trained eye and it may have been difficult to discern the work as incomplete. Or after waiting twenty-five years for the finished altarpiece so they could end construction on their chapel, the Confraternity gave up on being overly critical. They accepted Leonardo’s work as it was and closed the matter and contract once and for all.

Who Painted the Second Virgin of the Rocks?

Art historians agree Leonardo da Vinci was responsible for the majority of the Louvre’s Virgin of the Rocks based on its similar style to his other paintings started around 1483. The second painting is not as easily placed within the master artist’s oeuvre and determining who was responsible for the creation of the National Gallery’s painting is still heavily debated. Archival research performed by Pietro Marani has argued the second Virgin of the Rocks (fig.13) was executed between 1491 and 1494 in large part by Leonardo’s students and assistants, Marco d’Oggiono and Giovanni Antonio Boltraffio. During 1493 and 1494 Leonardo was occupied with an equestrian monument he had
Fig. 13. School of Leonardo. *Virgin of the Rocks*, 1493-1508. Oil on panel (second painting), 189.5 x 120 cm. London, The National Gallery. Museum Photo.
promised to Ludovico Sforza to honor his late father Francesco Sforza. Leonardo was simultaneously preparing studies for the *Last Supper*. Leonardo’s living assistant for the commission, Ambrogio de’ Predis, spent most of 1494 attending to Bianca Marie Sforza. He accompanied her to finish the first version of the painting on her trip to Innsbruck after her marriage to Maximilian I. However, Predis was present in Milan in 1495 until the end of the commission in 1508. This forced Leonardo’s other pupils to start the painted work on the second panel in 1494.

Giovanni Antonio Boltraffio is considered one of Leonardo’s most talented students. The elegance of his work has been compared to calligraphy and considered precious in nature. This is demonstrated in the details of the Virgin’s face and hair in the second *Virgin of the Rocks*. The curls of the Virgin’s tresses change color half way up her head, which would indicate a switch in artist. Most likely Leonardo began the painting of the hair and then left the remainder of the work to his assistant. A badly damaged preparatory study for the painting entitled *The Head of the Virgin of the Rocks*, now in Brera, has been dated to 1491. Attributed to Boltraffio, the study closely follows the work of the initial Virgin. The assistant’s ability to mimic his master’s technique would have enabled Leonardo to feel comfortable leaving the finishing details on the second panel to Boltraffio.\(^\text{108}\)

The simple representation and geological inaccuracies present in the landscape in the second *Virgin of the Rocks* make it apparent Leonardo was not responsible for this painting. The background and foreground were done in the most part by Ambrogio de’ Predis, with minimal assistance by Marco d’Oggiono or Boltraffio. There are small


\(^{108}\) Ibid., 141.
similarities in the rock formations between the second panel and *The Resurrection of Christ with Saints Leonard and Lucy* (fig.14) painted between 1491 and 1494, by Marco and Boltraffio. The plant life, such as the white tuft of the narcissi flowers located at the foot of Saint John in the National Gallery’s painting, is almost identical to the white narcissi at the right edge of the panel in Marco’s *Three Archangels Vanquishing the Devil* now in the *Pinacoteca di Brera* in Milan.\(^{109}\)

Both Boltraffio and Marco worked closely under Leonardo in Milan from 1482 to 1499. It seemed reasonable their master would have impressed upon them the importance of nature represented accurately, considering his desire to do so in his own work. The lack of nomenclature for geological forms in the fifteenth and sixteenth centuries would have made it impossible for Leonardo to tell his students how to paint a sandstone slab or diabase.\(^{110}\) Instead he would have encouraged them to practice painting nature by sketching directly from their environments, observing the forms around them, and sharing his own technical knowledge that would best help them represent nature.

Leonardo objected to the generic, inaccurate landscapes used by Renaissance artists that were only meant as backdrops and not used to heighten the work itself. Despite his efforts as a teacher, *Resurrection* is far from perfect in its geological representation. However, this was a result of the student’s lacking technique and painting style rather than a disregard for geological accuracy. His students did not possess the advanced abilities to capture such details but it is clear the effort to replicate the work of their master was present. Inadequate shading in the foreground of *Resurrection* resulted in a visual effect causing the foot of Saint Leonardo to look as if it is lifting vertically off the soil instead

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\(^{110}\) A diabase is a dark gray or black, fine-textured igneous rock composed mainly of feldspar and pyroxene.
of lying flat upon it. Improper shading in the background resulted in a lack of texture in the rocks behind Jesus and the mountains beyond the water. From this stemmed further problems such as the foot of Christ that looks as if it had been broken at the ankle and forced to face downward over the orange covered slanted rock. These geological inaccuracies are not blatantly apparent in a cursory viewing, but would be noticed immediately by a trained art historian or geologist.\textsuperscript{111}

Despite other painting errors, the width of the foreground in \textit{Resurrection} was painted wide enough to allow the figures room to kneel. This is contrasting to the London \textit{Virgin of the Rocks}, whose rock ledge was painted too narrow making the characters look as if they are about to fall off into the abyss. Leonardo consistently placed his figures on separate rocks to vary elevation patterns, avoiding this visual effect.\textsuperscript{112} After reviewing other paintings by Marco and Boltraffio, it is clear to this author that they were both aware of Leonardo’s rule of elevation. Both implemented it in their individual work as well as in \textit{Resurrection}. Marco demonstrated the elevation of characters in his copy of the first \textit{Virgin of the Rocks} and \textit{The Thuelin Madonna} (fig.15). Boltraffio used it in moderation in \textit{Madonna and Child} (fig. 8), placing the Christ Child on a pillow so not to look as He was about to slide off the table. The beginning date for the second painting of the central panel ranges from 1491 to 1494. However the sale of the first painting was in 1493, so the need of a second painting would not have occurred until the same year. Marco d'Oggiono and Boltraffio were skilled in space recognition and elevation techniques in their paintings at that time and would not have created such a blunder as making the figures in the painting look like they were about to fall into the abyss.

Therefore, another artist would have been responsible for the work; an artist who was not around while Leonardo’s style progressed and who did not possess the skills to advance his own techniques to match the evolving methods of his master. That artist was Ambrogio de’ Predis.

Although Marco d’Oggiono and Giovanni Antonio Boltraffio began the painted work on the second panel, Ambrogio took an active role in the process upon his return from Innsbruck. The details that are most often criticized within the second *Virgin of the Rocks* have been attributed to the second artist included on the commissions’ contract. Ambrogio is only credited to portraits and design work for coins, tapestries and theater sets. His ability to paint from nature and incorporate multiple figures into an extensive background was limited. This is apparent in the background and foreground work on the
second *Virgin of the Rocks*. As the other artist included on the Confraternity’s commission, Ambrogio must have felt obligated to complete the work required on the second panel. Unfortunately, he had minimal experience in the techniques necessary to achieve Leonardo’s hypernaturalism. This is clear in Ambrogio’s *Girl with Cherries* (fig. 16) dated to 1494 at the MET. The portrait is the work of an artist not entirely capable of following Leonardo’s rules for painting written in his manuscripts. The shading under the girl’s chin, where it reaches her next, is similar to the over-shadowing of the Virgin in the second *Virgin of the Rocks*. The girl’s hovering hand with outstretched fingers over the fruit is significantly more detailed than Ambrogio’s other portraits, but still feels unnatural. Her flowing, curly, red hair is by far the closest to Leonardo’s work, a direct reflection of the master artist’s love of motion. The curl’s luster and shine was produced through edge contrast, one of Leonardo’s tools for creating natural-looking forms. Unfortunately, the use of Ambrogio’s hypernaturalism only draws further attention to the errors within the painting. The black bows on the girl’s dress are completely two-dimensional. The fruit in the bowl possesses none of Leonardo’s requirements for plant life or any form in general. And the crown of ivy atop the girl’s head projects no shadows onto her face. Ambrogio’s inability to be a capable follower of Leonardo’s painting methods only help to prove he did paint the background and foreground of the second *Virgin of the Rocks*. The background, while comparable in general shape to the first painting, is still geologically inaccurate and does not follow Leonardo’s rules for hypernaturalism. The *Girl with Cherries* and the second *Virgin of the Rocks* are similar in they both attempt to reach Leonardo’s level of work, but fall short.
In 1508 the second painting was handed over to the Confraternity, bringing a long-awaited end to the commission. In a document from the same year dated August 18, Ambrogio was granted permission to copy the painting. This was only allowed if Leonardo supervised the process and the assistant provided half of the commission’s income to his teacher. Who the painting was for and its current location is still unknown. Giovanni Antonio Boltraffio and Marco d’Oggiono also made reproductions of the *Virgin of the Rocks*, but they were copies of the first version. Marco’s reproduction is in the *Castello Sforzesco* in Milan and Boltraffio’s is now part of a Private Collection in Switzerland, formally the ex-Cheramy Collection in Paris.\(^{113}\)

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Although the majority of the second *Virgin of the Rocks* was painted by Leonardo’s assistants, the master artist still contributed to its creation. The second panel’s underdrawings have been attributed to Leonardo through scientific analysis by the National Gallery. Details in the panel’s painted layer include two of Leonardo’s signature techniques. The first is visible in the unfinished hand of Gabriel supporting the Christ Child’s back. The thinned paint was a result of over-working and revealed blended brushwork lines with no sharp edges. This style is consistent to Leonardo’s other drawings and studies, such as his *La Scapigliata* (fig. 17) done between 1506 and 1508.\(^{114}\) The second signature of Leonardo in the painting is his fingerprints used to create the details of the Virgin and holy children’s faces. Leonardo often used this technique for his creation of *sfumato* particularly in his earlier days as an artist in the 1470s and 1480s. He implemented it again when he returned to Florence in 1499. Scientific research performed on Leonardo’s 1503 painting, the *Mona Lisa*, showed the use of his fingertips in the subject’s face.\(^{115}\)

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Chapter Four
Comparing and Interpreting the Two Paintings

The Louvre’s Painting

The *Virgin of the Rocks* in the Louvre is considerably more resplendent and alluring than its counterpart. The geologically accurate background and soft facial features draw the viewer into a life-like scene of a religious congregation. A few years prior to the commission from the Confraternity, Leonardo wrote in his manuscripts of a location he visited that was rocky and surrounded by water.\(^{116}\) He reported feeling amazed and inspired by his surroundings, which allowed the over-whelming beauty to transfer from his memory onto the panel.

Drawn by my eager desire, wishing to see the great manifestation of the various strange shapes made by formative nature, I wandered some way among gloomy rocks, coming to the entrance of a great cavern, in front of which I stood for some time, stupefied and uncomprehending such a thing…Suddenly two things arose in me, fear and desire; fear of the menacing darkness of the cavern; desire to see if there was any marvelous thing within.\(^{117}\)

Leonardo’s personal experiences gained from studying nature gave him an advantage over other artists. Many artists in the Renaissance still believed their knowledge came from reading and studying the texts of those that came before them. Leonardo would begin his research with the written word, but continued his education by investigating the subject himself.\(^{118}\) His ability to capture what he found during his experiments is what gives the first *Virgin of the Rocks* its magnificence, awe and splendor.

Leonardo purposively positioned his seated figures in the painting so they created a circle inside the canvas. The Christ Child sits on a rock in front of the Virgin who holds

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a foreshortened hand over His head. The angel Gabriel points to Saint John with one hand and supports the back of Christ with the other. Saint John kneels down to Christ, accepting his Savior’s blessing while in prayer. Their elliptical flow is amplified by the swirling water behind them and revolutionary lighting effects only Leonardo could produce in the late fifteenth-century.\textsuperscript{119} Dismissing traditional techniques used to mimic light and shade on the subject of the painting, Leonardo reproduced actual light that would have been found within nature prevalent to the scene.\textsuperscript{120} The combination of the figures presented in natural lighting effects allowed Leonardo to create a total unit within the pictorial structure.

The faces in the Louvre’s \textit{Virgin of the Rocks} are the most astonishing feature in the painting. Gabriel looks out to the viewer with youth and vivacity, drawing attention to Saint John by pointing to him across the panel. The use of Gabriel as the \textit{commentator} was a method noted by Leon Battista Alberti in \textit{A Treatise on Painting} from 1435. He wrote, “In an epic painting I like to see someone who admonished and points out to us what is happening there.”\textsuperscript{121} Gabriel’s hand not only functions as a commentary on Saint John praying to the Christ Child, but also fills the negative space above Christ’s head and clarifies the vertical accent resulting from the foreshortened hand of the Virgin. These elements relinquish importance to Saint John and Gabriel, instead of the Christ Child who is only identifiable by his blessing gesture.\textsuperscript{122} Because of the proximity of the blessing to the pointed hand of Gabriel, the foreshortened hand of the Virgin and the praying hands of Saint John come together to form a unified whole in the shape of the holy cross. The

\textsuperscript{120} Jack Wasserman, \textit{Leonardo da Vinci}, 82.
\textsuperscript{122} Jack Wasserman, \textit{Leonardo da Vinci}, 86.
simple visual technique allowed Leonardo to introduce the theme of the Immaculate Conception, the Passion and the Death of Christ without filling the panel with wanton components.\textsuperscript{123}

As the Confraternity requested, the theme of the painting was to follow the Franciscan stories detailing the Virgin’s Immaculate Conception. The deep, rocky, wilderness terrain of the background has significant elements that focus on the female body. Leonardo placed the Virgin, Christ Child, Saint John and angel Gabriel in a nameless grotto as if they were in the very womb that Earth began. The dark watery background represents the feminine reproductive system, the untouched mountains represent the Virgin’s pureness and the palm leaves surrounding the scene are a traditional symbol of the Virgin and victory.\textsuperscript{124} The background could comment on the purity of nature and the corruption of humanity or the ability for it to become corrupt. However, the figures in the scene exemplify natural perfection or what humans should strive to be, placed amongst the most perfect of natural settings. The painting is a melding of Leonardo’s love of nature and the religious ideology required for the commission of the first \textit{Virgin of the Rocks}.\textsuperscript{125}

It has been suggested by Pietro Marani that the inspiration for the first painting’s unique Immaculate Conception scene came from the \textit{Apocalypsis Nova}.\textsuperscript{126} Written by a Franciscan theologian, the Blessed Joao Mendes da Silva Amadeus or Amadeus of Portugal, the manuscript was said to have been dictated to him directly by the angel Gabriel. It was considered a semi-heretical text due to its prophecy of the Angelic Pope

\textsuperscript{124} Patricia Emerson, “Leonardo’s Landscape in the \textit{Virgin of the Rocks},” 116.  
\textsuperscript{125} Ibid., 118.  
\textsuperscript{126} Joao Mendes da Silva Amadeus, \textit{Apocalypsis Nova} (1460), 10.
and unity of the eastern and Latin churches, bringing rise to a new form of Christianity.\textsuperscript{127} Despite the known backlash from the Church regarding Amadeus’s manuscript, it was favored by acclaimed Italians such as Bianca Maria Sforza, her grandfather Francesco Sforza and Pope Sixtus IV. \textit{Apocalypsis Nova} proposed an unorthodox, Gnostic interpretation of the dogma for the Immaculate Conception, in which the Virgin and Saint John, rather than Christ, were the protagonists of the New Testament. The text also claimed the Virgin Mary personified divine wisdom and was endowed with the gifts of perfection and universal knowledge.\textsuperscript{128}

Before the Blessed Amadeus of Portugal’s death in Milan in 1482, he founded a congregation in Rome based on his beliefs. By the sixteenth-century multiple copies of his manuscript had already circulated throughout Italy. As the artist’s own manuscripts divulge, Leonardo was a man dedicated to knowledge and experience. However, his education was limited by his self-proclaimed illiteracy because he was unable to read Latin fluently until 1490. Despite his limited abilities to read from Latin-texts, friends, pupils and employers aided Leonardo in his quest such information.\textsuperscript{129} It is likely the theories in the \textit{Apocalypsis Nova} were introduced to the habitual learner before the commission of the Louvre’s \textit{Virgin of the Rocks}. The enhanced relationship of Saint John and the Virgin over the Christ Child and His mother, along with the inclusion of the angel Gabriel instead of the Confraternity’s request for two prophets, follows the stories written by Amadeus.\textsuperscript{130}

The two *Virgin of the Rocks* have been reproduced on multiple occasions, but it is discernable the first painting was favored by Leonardo’s school of artists. This is seen in the higher quantity of reproductions of the first painting compared to the second. Leonardo’s integration of Biblical figures within nature and his use of space and depth prevailed in other artists’ work in the sixteenth-century. Unfortunately, those outside of the *Leonareschi* or *Leonardesco* schools who attempted to copy the master artist’s methods were never able to grasp the proper techniques or acquire the necessary skills to perform as Leonardo did. Lesser gifted craftsmen created depth of space through perspectival tricks and architectural foreshortening. Leonardo produced a superior hypernaturalistic scene through figure structure, composition and advanced lighting techniques.  

**The National Gallery’s Painting**

While the Louvre’s painting of the *Virgin of the Rocks* focuses on accurate geological formations, feminine facial features and delicate drapery, the National Gallery’s panel is defiantly masculine and heavy (fig. 18). The Virgin’s facial forms are those of an older, bulky woman unlike the warm dreaminess of the Louvre’s holy mother. Her entire body, along with the rest of the characters, is vastly larger, taking up a significant portion of the panel space. The modifications in size did coincide with Leonardo’s progression in his work, represented in his *Last Supper*, done between 1495 and 1497. In the Biblical painting originally on a rectory wall in the church of *Santa Maria delle Grazie* in Milan, the figures’ body sizes are significantly larger than the characters in Leonardo’s previous work. With the increase, Leonardo left less of the

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Fig. 18. Side by side comparison. Left: School of Leonardo, *Virgin of the Rocks* (see fig.13). Right: Leonardo da Vinci, *Virgin of the Rocks* (see fig.12).

panel for a background, a radical modification for the artist as it decreased useable space for environmental details. The alterations shown in Leonardo’s *Last Supper* were transferred to the second *Virgin of the Rocks*. However the inclusion of the artist’s advancements did not provide the London painting with the luster and crisp execution seen in the Louvre’s painting. The Virgin’s sharp-edges and drab demeanor produced with mechanical lighting and shading, demonstrate a complete loss of radiance. Her surrounding atmosphere lacks the mystique and gentle formations portrayed by Leonardo
in the first painting. This assists in the argument that the majority of the painting must have been completed by the Leonardo’s assistants and not by his own hands.\textsuperscript{132}

Although a comparison of the panels demonstrates the striking difference in the two figures of the Virgin, the angel Gabriel in the second panel is somewhat closer to the initial painting. The second version displays Gabriel’s original vivaciousness, featuring his admiration of the Virgin similar to the Apostles’ expressions in Leonardo’s \textit{Last Supper}. However, the angel’s face lost its feeling of innocence that was present in the initial panel. This removal suggests the figure was painted by a pupil who was unable to capture the innocence demonstrated by Leonardo in the first painting. Only the finishing details on the second Gabriel can be attributed to the master artist, as his fingerprints have been found in the top painted layer. The biggest change for the angel was the removal of his pointed hand, an edit considered to be a modern step forward. In the last decade of the fifteenth-century, Alberti’s theory of \textit{commentating} a painting was no longer common practice and considered out-dated.\textsuperscript{133} However, the exclusion of the pointed hand was not filled by another element, leaving a large gap above the Christ Child’s head. The lack of design knowledge suggests to this author that Leonardo was responsible for the removal of the old-fashioned pointing gesture, but left the manifestation and replacement of the action to a pupil who was incapable of performing the task properly. The hand removal also deleted the cross formation created through the character’s individual motions. The elimination of the pointing along with Gabriel’s side glance to the viewer succeeds in emphasizing the Christ Child but only through dismissing the underlying religious significance that made the first painting so esoteric.

\textsuperscript{132} Jack Wasserman, \textit{Leonardo da Vinci}, 84.
\textsuperscript{133} Ibid.
The children in the second painting are comparable to the fleshy, round youth often painted by artists Donatello and Verrocchio in the early fifteenth-century. Unfortunately the gentleness produced by the influential artists was not translated to the children in the second panel. An example of this is the feet of the included toddlers that are considerably larger than what should be proportional to their bodies. This would have been an unlikely error for Leonardo considering he took pride in replicating nature and the human form so accurately. Many Renaissance artists drew body proportion by matching the model’s foot length to the size of their head. It would seem the artist responsible for the Christ Child and Saint John in the second Virgin of the Rocks forgot this rule did not apply to children, whose heads did not progress in growth at the same rate as their lower appendages. The stature of the feet is even more absurd considering the size of Christ’s head. The Child’s cranium in the National Gallery’s painting is almost double in size to the Louvre’s. Although the increased head size appears over-whelming compared to the first painting, it may have been visually appealing if the other existing details had been appropriate to the painting.\textsuperscript{134} To this author, the modifications in brushwork and style from the first panel to the second altered Christ from a sweet Child with petite facial features to an image resembling a balding old man more than a baby. The loss of Christ’s gentle curls along with an added elongated nose and chin transformed the young Savior to a less-appealing miniature man.

Despite these changes, historians like Martin Kemp and Martin Davies believed the second Virgin of the Rocks was stylistically more mature than the first. They argued the character and background forms gained new amplitude and the architectural grandeur of the group increased as a whole through their enlargement, taking up more space on the

\textsuperscript{134} Jack Wasserman, Leonardo da Vinci, 90.
The elimination of the literal pointing to Saint John and outward glance by Gabriel created a wordless communication amongst the characters, developing a higher intellectual context of the work. The viewer is forced to interpret the scene for themselves and consider what is occurring instead of having it explained to them. The majority of the modifications elevate the importance of the Virgin and her connection to her Son. Along with the removed gestures of Gabriel and size increase of the characters, halos were added to the Virgin, Christ and Saint John and the latter holds his traditional golden staff; elements added for easier identification. However, x-rays and close examination have shown the golden staff and halos were added by an unknown artist many years later. Although historians Kemp and Davies argued the removal of elements from the second painting increased the quality and intellectual level of the work, it is this author’s opinion that the deletion of the specific details did just the opposite. Dismissing Gabriel’s gesture and increasing the size of the Christ Child overall disturbed the serene yet mysterious ambiance so pronounced in the first painting. The focus on the Holy Son in the second painting may not be announced to the viewer, but it is poignantly clear none the less.

The Two Side Panels

The National Gallery is in possession of the two lateral panels painted for the commission of the Confraternity of the Immaculate Conception. Neither side painting is on display at the Gallery due to conservation work being done for recent cracking. Each panel depicts one angel playing a musical instrument in a painted niche on poplar. The flanking panel set to the left of the central painting, *The Angel in Green with a Vielle* (fig.19) was acquired from the *Melzi* Collection at the end of the nineteenth-century. It is well preserved except for cracking in the face of the angel and portions of the background caused by repainting. The *Angel in Red with a Lute* was placed to the right of the central panel and is in even better condition than the green angel. The right panel has only minor damage in the red paint of the angel’s dress (fig. 20).\(^{138}\) Both figures were inspired by Donato Bramante’s *Uomini d’arme* (Army of Men) military figures from 1486, now residing at the *Visconti Panigarola* House in Milan (fig.21 and 22). The side panels of the *Virgin of the Rocks* exemplify a compromise of Leonardo’s early Florentine style and his Milanese work in the 1490s.\(^{139}\) Despite the clever concession, the angels are not considered works of genius. The side panels are seen as mere copies of Bramante’s paintings and lacking in the magnificence that has been associated with the work of Leonardo.

As with the central panels, art historians have debated about the responsible artist(s) of the flanking angels. Historian Jack Wasserman has attributed the angel in green to Marco d’Oggiono and the angel in red to Ambrogio de’ Predis. His assumptions were based on the change in style of the two angels, as the one in red more clearly


resembles Leonardo’s earlier work better represented by Ambrogio.\textsuperscript{140} Cecil Gould submitted both angels were painted by Ambrogio while the painting and gilding of the full \textit{ancona} was done by his half-brother Evangelista. Gould’s theory coincides with the 1503 document written by Ambrogio in which he requested his and his then deceased brother’s payments, as they had completed their required portions of the contract.\textsuperscript{141} Martin Davies, former director of the National Gallery, insisted the second painting was the only painting ever involved in the Confraternity’s contract and the only painting ever to be hung in the chapel of the Church of \textit{San Francesco Grande}. Davies believed the Louvre’s painting was a Florentine creation done by Leonardo before he left for Milan in 1482. The former director compared the side panels to both the central panels and concluded the angels imitate the style of the London painting. He argued the flanking panels would have matched the style of the Louvre’s painting if it had been part of the commission, since the panels were part of the contract.\textsuperscript{142} What Davies failed to note were the significant changes in both panels after their initial conception. The underdrawings on the right panel reveal the angel’s chin and nose were repositioned at one point along with the angel’s right arm and lute. The cartoon also shows the hair of the angel was originally longer but reduced, exposing more of the shoulder and collar area.\textsuperscript{143} On the left panel, the angel’s head was repainted to match the position of Gabriel’s head in the second central painting. The angel in green’s wing was moved back and there was a change in the drapery to mimic the robes of the Virgin. These modifications would be better suited to argue the side panels were originally created for the Louvre’s central

\begin{footnotesize}
\begin{enumerate}
\item Jack Wasserman, \textit{Leonardo da Vinci}, 27.
\item Cecil Gould, “The Early History of Leonardo’s \textit{Vierge aux Rochers},” 216.
\item Martin Davies, \textit{The Earlier Italian Schools: National Gallery Catalogue}, 262.
\item Ibid.
\end{enumerate}
\end{footnotesize}

Fig. 20. Ambrogio de’ Predis. *An Angel in Red with a Lute*, c.1483. Oil on wood, 118.8 x 61 cm. London, The National Gallery. Museum Photo.


Fig. 22. Donato Bramante. *Armed Men Series*, c. 1481. Fresco transferred to canvas. Milan, Pinacoteca di Brera. Reproduced from Italica Rai Internazionale.
painting, but as it was sold to Ludovico, a new central panel was needed. Therefore, the side panels needed to be adjusted to match the style of the second central panel now in the National Gallery.  

Famed architect and follower of Leonardo, Ambrogio Mazenta, wrote of the two side panels in 1635. Mazenta noted he saw the “panel in the Chapel of the Immaculate Conception” and other smaller panels that he concluded were executed by Leonardo. The reference to “other smaller panels” indicates there may have been more than two side panels. The Confraternity’s list of ornaments requested eight music making angels split into two groups on each side panel. It is possible the artist created more than two angels, but instead of grouping them, separated them onto different panels. Mazenta also noted the artist Il Vespino made a copy of the central panel which is part of the permanent collection at the Pinacoteca Ambrosiana in Milan. His reproduction is of the National Gallery’s painting and is almost identical in size. Il Vespino’s Virgin of the Rocks has three numbers on its back which may have indicated where the side panels should have been placed. Unfortunately no additional side panels were found and are considered lost, along with any other panels for the contract originally done by Leonardo or his pupils.

The Geological Differences between the Two Paintings

One distinguishable difference between the two Virgin of the Rocks is the geological contrasts of their backgrounds and foregrounds. In “Leonardo’s Geology: The Authenticity of the Virgin of the Rocks” by Ann Pizzorusso, the geologist and Renaissance art historian compares the geological irregularities of the two paintings.† She notes the differences in the painting’s geological representations may not be obvious to the average person. However the extreme accuracy in the Louvre’s painting allows a geologist to identify each rock formation and plant clearly. The National Gallery’s painting contrasts to its predecessor as it is completely lacking in factual earthly details. In the first painting, the background grotto was painted to give the illusion of weathered sandstone dissected by a harder layer of rock. The top of the grotto is rounded, indicating the formation would have been spherically weathered and formed by gathered mounds of sandstone. Leonardo’s painting depicts genuine forms such as an igneous rock jutting out from the vertical relief behind the Virgin’s head. The painting is so accurate researchers are able to identify the igneous rock was formed through the interjection of molten liquid into the vertical relief, then spread over the existing sandstone, developing into a ring of rocks several feet high. The mass would have contracted as it cooled on impact, forming the specific vertical points Leonardo painted. Clearly the knowledge of geological rock formation was not available to the master artist. He reproduced what he saw in nature so perfectly it looks as if he was studying the rock’s formative aspects from a map or book.‡

‡ Ibid.
Directly above the Virgin’s head is a rock called a *basal* or bottom contact. There is a horizontal crack near the base which is the seam separating the diabase and the sandstone below it. The diabase column extends upward to the top of the grotto meeting a sandstone horizontal contact surface. The rocks extending from the basal contact line from the Virgin’s head to the foreground are painted as sandstone. They are appropriately textured to appear weathered and rounded as they would in nature. The soft rock being at a high elevation would have been accessible to gusty winds causing erosion marks. In the foreground Leonardo painted the sandstone rock as heavily weathered but retaining its highly defined, horizontal, layered structure. Diabase rock is naturally harder than sandstone and less prone to erosion. Leonardo would have observed the natural differences and emphasized the sharp edges and vertical reliefs created with the igneous element. The jagged rocks in the background rising from the blue-gray mist are remnants of the erosional process stripping away the overlaying softer rock, while leaving only the hardest rock behind. These formations have been subtly but accurately portrayed by the artist.\footnote{Ann Pizzorusso, “Leonardo’s Geology: The Authenticity of the *Virgin on the Rocks,*” 197.}

The vegetation in the first *Virgin of the Rocks* is equally accurate as the authentic rock formations. Leonardo had to study each plant location and note why their environments varied from requiring sunlight or darkness or could only grow in soft rock or water. This knowledge was necessary for him to manifest an accurate geological scene. The artist’s observations led to his painting of flowers and plants rising from the sandstone ground; not from the hard, silt-like diabase that is unsuitable for plants to strive. In comparison, the flora in the National Gallery’s painting opposes the laws of nature. The flowers throughout the panel are diverse and rooted in multiple types of rocks
and different shaded environments. There is no consideration for the living conditions necessary for the plants to actually grow. It is unlikely Leonardo who was adamant about his geological representation would have created the extensive geological errors in the second painting. The abstract plant life and artificial rocks are uncharacteristic of their settings. For example, various types of limestone expand across the foreground instead of the sandstone rock traditionally found in the painted environment. The biggest conundrum in the second Virgin of the Rocks is the glacial lake or fjord placed by the artist into the far background. Fjords were not part of the Italian landscape, therefore unavailable for Leonardo to personally view. As his manuscripts detail, Leonardo would not have painted an object if he could not study the details and movement in person.

Painter, you should know that you cannot be good if you are not a master universal enough to imitate with your art every kind of natural form, which you will not know how to do unless you observe them and retain them in your mind.150

The artist who did paint the fjord must have reproduced it from an image created where glacial lakes were prevalent.151 This error along with improperly painted rock specimens, and erroneous plant and flower life in uninhabitable locations cause great doubt Leonardo painted the National Gallery’s Virgins of the Rocks. Instead, the work should be classified in the catalogue of Leonardo’s pupils.

Reproductions

Both Virgin of the Rocks have at least twelve copies each; the first painting’s reproductions date from the late fifteenth and early sixteenth-centuries and the National Gallery’s copies are from the sixteenth-century only. The lateral panels were not as

popular as the central panels resulting in one known copy by Il Vespino.\textsuperscript{152} The majority of the central panel’s reproductions were painted by Leonardo’s contemporaries. They were often on a smaller scale and, unfortunately, left with little or no documentation regarding their commissions. Conversely, Ambrogio’s copy of the second painting was lost but the contract documenting its existence is archived in Milan. However, the document recounting the Confraternity’s approval to reproduce the second panel does not reveal who commissioned the work.\textsuperscript{153}

The twenty-four reproductions of the two differing versions do not include copies made in other mediums such as the embroidered and quilted \textit{Virgin of the Rocks} at the \textit{Museo Baroffio} at the \textit{Sacro Monte} in Varese (fig. 23). The altar front was stitched on a silk cushion in 1521 by an anonymous artist. Many additional images based on the \textit{Virgin of the Rocks} have been painted, but are not considered copies as they are not exact matches to either of the versions. In 1522 member of the \textit{Leonardeschi}, Bernardino de’ Conti, executed a work similar in characteristics of both \textit{Virgin of the Rocks}. The painting was unfortunately destroyed during a fire while in the collection of the Kaiser Friedrichs Museum in Berlin. Conti’s painting \textit{Madonna with Child and Saint John} included the Christ Child and Saint John joined in a kiss (fig. 24). It is unclear if the endearment was inspired by Leonardo, but it was a repeating theme used by many of his followers in the sixteenth-century. Leonardo’s paintings continued to inspire other artists well into the seventeenth-century. They educated themselves on his written work, such as his \textit{Treatise}

\textsuperscript{152} Pietro C. Marani, \textit{Leonardo da Vinci: the Complete Paintings}, 133.
\textsuperscript{153} Ibid., 148-149.
Leonardo’s manuscripts assisted in the student’s artistic growth by teaching his techniques and methods that made him a legendary artist.\textsuperscript{155}

Those who believed the National Gallery’s version was the only painting involved in the Confraternity’s commission follow the belief that the London painting was completed in the 1480s. As the contract date was signed in 1482 and other documents are dated over the course of twenty-five years, the evidence can conclude nothing else.

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\end{figure}

\begin{figure}[h]
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\includegraphics[width=\textwidth]{fig24.png}
\end{figure}

Historians who believe in the substitution theory attribute the start of the second painting to the 1490s and its continuation to the beginning of the sixteenth-century. These dates are based on the painting’s style which matches the changes that occurred not only in Leonardo’s studio, but in Renaissance art at the time. The reproductions and adaptations of the *Virgin of the Rocks* from the 1480s, 1490s and early sixteenth-century may assist in resolving the uncertainty over the painting’s completion dates.\(^{156}\)

Milanese artist Giampietrino (Giovanni Pietro Rizzoli), second generation *Leonardeschi*, painted the *Adoration of Christ by Saints* (fig. 25), now in the *Museo Mansion CFagnola* in Gazzada. Although Giampietrino was a contemporary of Leonardo, he was unable to reproduce the captivating appeal resonating from the first *Virgin of the Rocks*. The pyramidal shape that formed the group’s unity in Leonardo’s painting was reduced for the exaggerated details of the figures. Instead, Giampietrino focused on his character’s sweet facial features, draping garments and complex body positions. The artist’s interest in veering from the first *Virgin of the Rocks* may have resulted in his painting being aptly named *Adoration of Christ by Saints*. The change in titled allowed him to alter the Virgin’s expression from the somber calm seen in Leonardo’s panel to a woman brandishing joy and admiration as she looks down to her Son.\(^{157}\) Despite the elation on her face, the Virgin shows no excitement in her posture. Her restricted arm movement and stiffened form suggests she is uncomfortable in her surroundings. This is further emphasized by the elaborate poses of Gabriel and Saint Joseph on either side of her. The contrast between the male figures and the holy mother make her appear to be as immobile as the column at her side.

\(^{157}\) Ibid.
To the Virgin’s left there is an angel akin to the red and green angels from the Confraternity’s flanking altarpiece panels. The addition of Saint Joseph veers from the original painting and he stands in a pose that mimics the small angel second to the right in the same scene. Giampietrino’s Gabriel is a blend of both Gabriels from the two Virgin of the Rocks. As a member of the Leonardeschi, the artist would have seen both paintings, or at the very least, the cartoons for the original version. In his Adoration of Christ by Saints, Gabriel is shown pointing to the Christ Child and looking outward as he does in the Louvre’s painting. However, the draped robe, tilted head and prominent shoulders are reminiscent to the London version.\footnote{David Alan Brown, Origins of a Genius, 169.} Another work by Giampietrino, The Virgin Nursing the Child with Saint John the Baptist in Adoration (fig.10) dated between 1500 and 1520, mimic’s elements of the Virgin of the Rocks in the National Gallery. Saint John looks onto the scene, bending one knee to the ground. This is the same stance he assumes in the second painting but with his legs in a reversed position. Giampietrino included Saint John’s halo and gilded cross which are awkwardly painted as they are in the London panel. Although the identification elements were added at an unknown later date by an unknown artist, Leonardo’s second underdrawing on the London panel did include Saint John’s gilded cross but was omitted by his pupils. The young saint’s head is positioned at a tilt and his curly blonde hair is almost identical to that in the London painting. Saint John kneels adoring the Christ Child, whose legs are crossed and one hand is outstretched blessing the Baptist. The leg position of Christ in Giampietrino’s painting mimic the Baby’s legs in the National Gallery panel. However, His bottom leg is extended in length, due to his enlarged size. The third figure in the scene, the Virgin, does
not physically match the mother in either *Virgin of the Rocks*. Her draping robes, however, flow almost exactly as those in the second central painting.\textsuperscript{159}

Unfortunately neither of Giampietrino’s adaptations can assist in providing a beginning or ending date for the second *Virgin of the Rocks*. Luckily a replica of second painting by artist Fra Antonio da Monza’s entitled *Pentecost* (fig. 26) may be more enlightening. The miniature on parchment, now in *Albertina* of Vienna, has been associated with Pope Alexander VI Borgia. The inclusion of the Pope’s portrait on the medallion of the miniature in the painting suggests he commissioned the work from Fra Antonio.\textsuperscript{160} The characters grouped within the miniature more closely resemble those of Leonardo’s *Last Supper* than the *Virgin of the Rocks*. However, *Pentecost*’s decorative elements and specific figure designs parallel those in the London version of the Confraternity’s painting. The young apostle in the lower right of the miniature stands in a similar pose reminiscent to Gabriel in the second painting. He is also adorned with the same draped robes, backward head tilt and prominent shoulders. Even Martin Davies, who stated the replicas painted by Leonardo’s followers proved nothing regarding the beginning and end dates of the two *Virgin of the Rocks*, admitted the putti decorating the image’s boarders do seem derived from the kneeling figure of Saint John in the second panel. What is helpful about this miniature is the date in which it was created. As it is connected with Pope Alexander VI, it is assumed the work was completed during his pontification between 1492 and his death in 1503. Considering the figure of Gabriel in the London *Virgin of the Rocks* inspired Fra Antonio’s own angel in his painting, the Franciscan artist must have seen the work before starting his own. That would imply the

\textsuperscript{159} David Alan Brown, *Origins of a Genius*, 170.

\textsuperscript{160} Cecil Gould, “The Early History of Leonardo’s *Vierge aux Rochers* in the Louvre,” 221.
second *Virgin of the Rocks* had to have been far enough along for Fra Antonio to view it in a similar state as it is in the National Gallery. The image the Franciscan saw would have been in an unfinished state resembling Leonardo’s *Saint Jerome* in the Vatican. This is assuming Leonardo’s studio used the same cartoon of Gabriel from the first painting for the second panel. With the invasion of Milan by King Louis XII and the overthrow of Ludovico Sforza in 1499, many artists, including Fra Antonio, left the city for Rome. Leonardo, however, went to Florence. Therefore, it was necessary for Fra Antonio to see the second *Virgin of the Rocks* in a semi-completed state prior to 1499.\(^{161}\)

Another reproduction of the London *Virgin of the Rocks* is in the Louvre’s collection. The unpublished red chalk on white paper replica of the painting has been attributed by Pietro Marani to one of Leonardo’s lesser known pupils, Cesare Magni. Corresponding documentation exists proving the artist copied the second painting while it was on view at the chapel in 1508.\(^{162}\) The document details Magni traded his red chalk drawing to the church of *Santa Maria della Grazie* in 1524 in exchange for the saying of masses in perpetuity; a reoccurring practice during the Plague in Europe.\(^{163}\) The artist painted a second version of the reproduction which is now in the National Museum in Switzerland (fig. 27). Magni’s reproduction counters William Cannall’s theory that the painting in the National Gallery was never accepted by the Confraternity because it was incomplete. As the document states, Magni was granted permission to copy the *Virgin of the Rocks* that hung in the chapel at the Church of *San Francesco Grande* in 1508. The

\(^{163}\) Ibid., 181.


artist’s reproduction is too similar to the second panel’s style and figure composition to question if it ever hung in the church.

**Religious Interpretations of the Two Paintings**

Franciscan Immaculists believe the Virgin Mary was born without original sin on her soul. Dominican Immaculists believe the Virgin was sanctified by the Holy Spirit while in the womb of her mother, Saint Anne. The Dominican dogma follows the same story of Saint John the Baptist. The Bible states he was cleansed of sin while in the womb of Saint Elizabeth, the second cousin of Saint Anne. The conflicting ideologies resulted in the creation of the Confraternity of the Immaculate Conception in 1475 by the Franciscans. This was followed by the construction of the Church of *San Francesco Grande* in Milan. The Confraternity commissioned Leonardo to produce an altarpiece representing the Franciscan’s Immaculate Conception featuring the Virgin Mary, the Christ Child and two saints. Instead, Leonardo presented his *Virgin of the Rocks* depicting details from the Egyptian *Apopthegmata Patrum* or *Sayings of the Desert Fathers*; collections of anecdotes and aphorisms written by the elder Egyptian Desert Fathers in the fourth-century. The somewhat legendary and historical writings convey Christian ethics and principals on spiritual life from the perspective of early Christian hermits. The text was later reinterpreted and elaborated by other authors; an unknown thirteenth-century Franciscan writer similar to Saint Bonaventure penned *Meditations on the Life of Christ*. The Egyptian Fathers also influenced Jacobus de Voragine’s

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Legendae Aurea,\textsuperscript{166} Domenico Cavalca’s \textit{Le Vite dei S.S. Padri} \textsuperscript{167} and \textit{La Vita di San Giovanni Battista},\textsuperscript{168} which was originally in Latin, but later reproduced by an anonymous author in the fourteenth-century. Each story contains vivid descriptions that evoke overwhelming feelings of intimacy between the narrator and the reader. This affected multiple artists in the fourteenth and fifteenth-century in Europe causing countless paintings depicting the different tales from the \textit{Apophthegmata Patrum}.\textsuperscript{169}

Leonardo was devoted to his continued education and maintained a large collection of manuscripts on an array of topics. It is plausible he heard of the above mentioned written works prior to his arrival in Milan. The subject of his \textit{Virgin of the Rocks} combined “Repose on the Return from Egypt” in \textit{Meditationes Vitas Christi} and \textit{La Vita di San Giovanni Battista}. The first detailed the Virgin and her Son’s return trip to Egypt after their seven-year absence and escape from Herod’s massacre of the innocents. While traveling, the pair came upon the hermit child Saint John in the early stages of his life of penitence. However, “Repose” did not include the angel Gabriel; instead Saint Joseph accompanied the Holy Family.\textsuperscript{170}

\textit{La Vita di San Giovanni Battista} amplified the details of “Repose” but added a lengthy conversation between the two holy children in which the Christ Child prophesized His baptism of Saint John in the River Jordon, as well as the creation of the Holy Trinity and His impending Passion and Death. After, Saint John approached the

\begin{thebibliography}{9}
\bibitem{169} Joanne Snow-Smith, “An Iconographic Interpretation of Leonardo’s \textit{Virgin of the Rocks (Louvre),}” 134
\bibitem{170} Ibid.
\end{thebibliography}
Christ Child and respectfully knelt before Him allowing Christ to bless him. The full scene was detailed in a rocky, wilderness landscape and the angel Gabriel was present as the guardian of Saint John.¹⁷¹ The Virgin’s love for Saint John was described as if he was also her son. The affection of the two may have been influenced by the story of Luke 1:42 in which the Virgin’s cousin, Saint Elizabeth was pregnant with Saint John. Upon hearing the news of the Virgin’s pregnancy Saint John was said to leap for joy in his mother’s uterus, causing Saint Elizabeth to yell out “Blessed art thou among women, and blessed is the fruit in thy womb.”¹⁷² In Leonardo’s painting, the Virgin has her arm around Saint John and looks lovingly to him. The admiration emphasizes the relationship described in the many manuscripts the artist was able to reference and interpret for his unique Immaculate Conception.¹⁷³

Historian Joanne Snow-Smith argues Leonardo included details in his first painting that both represent Saint John the Baptist and Saint Francis of Assisi. Saint Francis was the founder of the Franciscan Church and the saint to whom the chapel of the Church of San Francesco Grande was dedicated. Francis Assisi was known for his model behavior and shaping his life around the stories of Christ. Those that followed Saint Francis considered him the second John the Baptist due to his behavioral merits and having John (Giovanni) as his original birth name. The name John was given to him by his mother and later changed to Francesco by his father who was away at the time of his birth.¹⁷⁴

¹⁷¹ Joanne Snow-Smith, “An Iconographic Interpretation of Leonardo’s Virgin of the Rocks (Louvre),” 132-133.
¹⁷² Ibid., 139.
¹⁷⁴ Joanne Snow-Smith, “An Iconographic Interpretation of Leonardo’s Virgin of the Rocks (Louvre),” 139.
In the first *Virgin of the Rocks*, the rocky background was connected to Saint John and the location of the Holy Family when they met the small boy on their travels. It may also represent Mount Alverna, the location where Saint Francis was to have seen Christ. Twelve-hundred years after the Crucifixion, Francis said Jesus revealed to him that the rocks of Mount Alverna were created immediately following His crucifixion. The splitting in the rocks occurred at the exact hour of Christ’s Passion. Francis alleged the stigmata was put upon him by Christ to renew His Passion and was instructed to live the rest of his life showing only love and compassion to others.  

In 1477 two publications were printed in Milan recounting a tale Saint Francis had shared with his friend and biographer Brother Thomas Celano. The first text was an Italian translation of a Latin manuscript written in 1263 by a Pseudo-Bonaventure author. *Saint Francis of Assisi: First and Second Life of Saint Francis* was based on the stories written by Thomas of Celano and chronicling the life of the saint. The second publication, *I Fioretti*, was written by an unknown author in the fourteenth-century and consists of fifty-three short chapters about the life of Saint Francis. Both texts include Saint Francis’ encounter with the angel Gabriel one year before his death. As he recounted, the angel offered to play him a lute to ease his pain and give him joy, but Francis graciously declined, fearing the act would be frivolous. The following night while Francis prayed, he claimed he heard the most magnificent sound of an unseen lute and divulged the magnificent event to Brother Thomas the following morning. In *I Fioretti* the story replaced the unseen lute player with an angel holding a viol in his left hand and

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175 Joanne Snow-Smith, “An Iconographic Interpretation of Leonardo’s *Virgin of the Rocks (Louvre)*,” 139.
drawing a bow across it with his right. The original text was printed prior to the first commission of the *Virgin of the Rocks* and it had a clear influence on the side panels depicting two music-making angels. One represents the angel in Francis’s story playing the lute and other details the angel described in *I Fioretti* playing the viol with a bow.\textsuperscript{178}

The alluded references to Saint Francis in Leonardo’s first painting were almost all removed in the second panel. Saint John and Saint Francis’ fervent love of the Virgin and ability to enlighten and enrapture people with hope and joy were shared characteristics in their lives and represented in art. However, the addition of the golden cross in the hands of Saint John ended his connection to the Franciscan saint and reduced the visible love between the child/Saint Francis and the Virgin. The removal of Gabriel’s pointing gesture also eliminated the importance of the child and any connection the figure held to Saint Francis. When applying the cartoon to the second panel, it is feasible Leonardo removed the angel’s hand movement to avoid any confusion regarding the subject of the painting. The chapel in the Church of *San Francesco Grande* was dedicated to the Immaculate Conception and the Virgin. Gabriel’s pointing hand emphasized the relationship of Saint John and the holy mother. This may have conveyed the Dominican dogma of the Immaculate Conception which was the Virgin possessed original sin and had it removed as it was for Saint John.\textsuperscript{179} Clearly, the Franciscans would have opposed the confusion or connection to the Dominican belief. Leonardo would have instruction his students to remove the gesture in the second painting to avoid any conflict. However, as the first painting was most likely incomplete before it was sold to Ludovico Sforza, Leonardo may have added the details connecting Saint Francis to the

scene, such as the pointing motion of Gabriel and the loving relationship between Saint John and the Virgin. He would have done this after he was informed the painting was a gift for Ludovico’s niece Bianca. The new bride was a well-known public figure, and Leonardo would have been aware she was a follower of Franciscan literature, particularly the stories written by the Desert Fathers. Bianca would have appreciated the references to Saint Francis, along with the stories from the Latin texts and fourteenth-century authors depicted in the first *Virgin of the Rocks*. 
Acquisitions of the National Gallery’s Panels

In 1576 the chapel dedicated to the Immaculate Conception in the Church of San Francesco Grande was demolished and the altarpiece containing the Virgin of the Rocks was transferred to another unknown chapel within the church. The Confraternity completely dissolved in 1781 and all of their possessions were inherited by the Hospital of Santa Caterina all Ruota. In 1785 Santa Caterina all Ruota sold the central panel to Scottish painter Gavin Hamilton who immediately brought it to England on December 24 of the same year. The painting was viewed by C.J. Greville who maintained a record indicating Hamilton sold the painting on February 1, 1786 to Lord Lansdowne.\(^{180}\) The painting was spotted in Lansdowne’s collection at the Shelburne House in 1802 or 1803 by a man named Goede. Although included in the Lansdowne sale on March 20, 1806, it was not sold. Not until 1817 was the central panel purchased and again sold a month later to the Earl of Suffolk. The Earl lent it to the British Institution in 1818 and recorded the painting’s presence in his collection at Buchanan in 1824. It was loaned to the British Institution on multiple occasions until the National Gallery finally purchased the second central panel in 1880 from the Earl of Suffolk.\(^ {181}\)

After the Church of San Francesco Grande was suppressed in 1798, the side panels of the music-making angels were confiscated by the Fondo di Religone. The Fund was part of the Repubblica Cisalpina, the government instituted in Milan by Napoleon.

\(^{180}\) Chris Morton, Senior Information Manager of The National Gallery, e-mail to author, June 25, 2010.

\(^ {181}\) Martin Davies, The Earlier Italian Schools: National Gallery Catalogues, 270.
The panels were then acquired by Cavalier Melzi in 1809 and entered the *Melzi d’Eril* Collection in Milan. They were given to the National Gallery by Melzi’s heir, Giovanni, in 1898.\textsuperscript{182}

**Conservation of the Louvre’s Virgin of the Rocks**

Unfortunately no concrete evidence has accounted for the whereabouts of the first *Virgin of the Rocks* prior to the seventeenth-century. All theories are speculations based on documents acquired over time. The earliest documentation verifying the location of the painting was written by Cassiano del Pozzo who described seeing the painting at Fontainebleau in 1625.\textsuperscript{183} Until recently, the transfer of the *Virgin of the Rocks* from poplar to canvas was said to have taken place in 1840. This date was used by the Restoration Commission of the Louvre, notated in the Museum’s archives and included in the Louvre’s inventory. However, in the 1960s the previous inventory was closely examined and a register account list provided the proper year for the transfer of the wooden panel. The record details the budget for the year of 1806 and includes payment to restorer Mr. Hacquin for “Vinci: The Virgin, the child and Saint Jon.”\textsuperscript{184} Therefore, the actual transfer of the Louvre’s *Virgin of the Rocks* took place in 1806 and was completed by Francoise Toussaint Hacquin. Hacquin replaced his father as the most sought after craftsman specializing in transferring paint from wood to canvas. After 1750, the Louvre’s Administration learned of the specialized technique and quickly adopted the

\textsuperscript{183} Ibid., 136.
procedure as their standard practice. The methods used today for transferring wood paintings to canvas are still very similar to the process in the eighteenth-century.\(^{185}\)

As described by author Gilberte Emile-Male, the method in which Hacquin used to transfer the first *Virgin of the Rocks* was lengthy and immensely delicate but immature considering the importance of the work. Hacquin began by placing a large amount of a paste-like substance onto the painting, adding moisture to the poplar. Then he spread a gauze or special paper over the panel that stuck to the paint in order to pull it up. Before the gauze began to dry, Hacquin placed small wooden coins underneath the paint to inflate the work and further maintain moisture. The wood panel was then thinned down through the use of saws or graters, until only fine particles of moist wood remained on the pictorial layer which would then be removed with knives. After the original paint from the panel was completely dried onto the gauze, it was then ironed onto a new canvas completing the process. The transference was over-seen by Commissioner-Expert Jean-Baptiste Pierre Le Brun who offered Hacquin ten francs per each foot of paint being moved. Hacquin rejected the offer and insisted on twelve francs per foot, which was the standard rate for the job. The painting had an area of twenty-four feet with twelve linear feet after the transfer was completed, equaling two-hundred and eighty-eight feet. Le Brun gave in to the counter offer and paid the requested sum. The Louvre could not risk losing Hacquin, who was one of the only men capable of the procedure and the only one willing to share the secrets of the process with the Museum.\(^{186}\)

Prior to the transfer from wood to canvas, the Louvre cleaned their *Virgin of the Rocks* in 1751. The cleaning was performed by two Louvre employees, Godefroid and

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\(^{185}\) Gilberte Emile-Male, “La Transposition de *La Verge aux Rochers* de Leonard de Vinci. Sa Date Exacte,” 119-120.

\(^{186}\) Ibid., 121.
Hake. A note from the Superintendent of Buildings at the Louvre suggested another cleaning was performed in 1788. In 1837, a restoration was performed but the age of the painting and the lack of care provided over the years was not ideal for the procedure. The cleaning resulted in further cracking of the painted layer. On February 19, 1906 a superficial cleaning was performed and in 1932 a reduction of varnish was applied. It was not until 1952 when a second restoration was considered. At the request of Germain Bazin, the Head of the Curatorial Department of paintings at the Louvre, the restoration took place on January 15, 1952. Bazin wanted to study the paintings by Leonardo da Vinci in the Collections of the National Museum of France to determine why the previous restoration attempts had caused more cracking and fading instead of aiding the quality. Bazin’s study lasted for five months ending on June 15, 1952. Seven paintings were included in the research, including Leonardo’s Virgin of the Rocks. The tests and analysis of the studies were performed and concluded by the Institute of the Optical in Paris. The paintings endured multiple experiments in a laboratory environment, including implementing different levels of radiation from numerous sources. The first was radiation from the sun applied at different angles. Monochromatic light and sodium were applied via lamp tubes radiating yellow light. The monochrome reduced the painting’s natural color and created a new image with significantly subdued light and shadows. This allowed the researchers to view new lines and brush strokes used to create Leonardo’s famous chiaroscuro techniques.

Further testing included the use of ultra-violet rays and infra-red rays which allowed detection of alterations to the surface and displayed any repainting that may have

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187 Vincent Delieuvin, e-mail to author.
occurred. The infra-red rays also allowed the researchers to view the first surface of the painting through the visible retouching of paint. This was unattainable through previous testing with other less technologically advanced lighting methods. The scientists examined the paintings with microscopic binoculars and under a photomacrophographic lens. The magnifying instruments allowed them to view certain areas of the painting otherwise invisible to the naked eye.\textsuperscript{189}

In June of 1952, the test results were submitted to the Commission of National and International Restoration and testing commissioner Germain Bazin. The microscopic examination revealed cracking superimposed on the painting. The networks of lines were significantly more than the scientists and curators originally believed. Although the varnish seemed to be fine, the pictorial layer had suffered the greatest. The deep breaks most likely occurred when the painting was transferred from wood to canvas with the majority of the damage in the painted figures, except for the Christ Child. For an unknown reason, His figure was transferred using a white gauze paper instead of the common yellow paper, which led to a different tone within the shape. The areas that experienced the most stress were the hands of Saint John, the Virgin and the angel Gabriel.\textsuperscript{190} This may have occurred because the extremities were the most delicate and thin and would be hardest to transfer from the wood panel to canvas.

Through spectrographic analysis of the Louvre’s painting, scientists learned what types of mediums and methods Leonardo adopted for his \textit{Virgin of the Rocks}. Particularly in the upper register of the painting Leonardo implemented salt of copper or copper  

\textsuperscript{189} Madeleine Hours, “Etude Analytique des Tableaux de Leonard de Vinci au Laboratoire du Musee du Louvre,” 18.
\textsuperscript{190} Ibid., 20-24.
acetate.\textsuperscript{191} The compound gave off a blue color, which Leonardo used to create the blue-green sky. He then painted over it with a yellow varnish; copper acetate is water soluble and the varnish was necessary to maintain the painting’s integrity. To achieve the exact blue pigment in the painting’s sky, Leonardo used smalt or zaffer; this is a blue powder consisting of colored glass and cobalt oxide. Leonardo was the first to use this pigmentation method and often benefited from it as it made a varnish unnecessary. The scientists also found traces of rubber which may have been mixed with the paint as a binding substance. However the high level of salt also present indicated another element may have been used. Further investigating revealed liquid syrup or a solution of potassium silicate and sodium; a technique master glassworkers applied for color additives in their work. The liquid syrup was not an uncommon medium for Leonardo as he familiarized himself with anything he could to produce a realistic image. The lead in the glue used for the transposition of the painting from wood to canvas did not allow full radiographic inspection. An actual restoration was not possible because of the unfortunate condition of the pictorial layer. It had become extremely compromised from Hacquin’s transference making the painting too fragile to repair. However, the scientific findings alone provided the Louvre with immense knowledge they had previously been unaware of. This enabled future curators and conservationists to take better care of Leonardo’s \textit{Virgin of the Rocks}.\textsuperscript{192}

\[\textsuperscript{191}\text{Copper acetate was originally made by scraping the skins of fermented grapes. The wine vineyard Ludovico gifted to Leonardo may have been the source for this.}\]
\[\textsuperscript{192}\text{Madeleine Hours, “Etude Analytique des Tableaux de Leonard de Vinci au Laboratoire du Musee du Louvre,” 25.}\]
Recurring Themes

Like the conservationists at the Louvre, National Gallery researchers have made gallant efforts to restore their painting to its utmost beauty. In 1949 a restoration was performed by then Assistant Curator Martin Davies. The process removed a significant amount of top paint, revealing the original paint laid by Leonardo’s pupils on the Gallery’s *Virgin of the Rocks*. By removing the repainted work, the canvas was dramatically altered. The affected areas consisted of the Virgin’s shoulder and the Christ Child’s left arm near His elbow. Davies discovered the fingers on the Virgin’s right hand had extensively been painted over many years after the panel’s initial creation. Unfortunately, the curator was unable to remove the thick over-painting as there were no other layers below except Leonardo’s second underdrawing. This was not an option, as it was barely visible to the naked eye and would have resulted in the section looking completely bare. The Virgin’s left sleeve was also significantly worn, compromising the pattern originally painted. Sizeable cracks within her dress also affected the brocade. The paint on the Christ Child’s face was thinned as a result of the *pentimenti*. The thinness continued on the out-stretched hand of the Virgin and the head of Saint John. Based on the reduction of the original paint and quality of what remained, Davies concluded the Child’s head had been modified at least two other times.

Despite the changes, the painting was considered to be in good shape for its age and size. The majority of the damage was in the dark part of Gabriel’s garment, caused by a considerable amount of flaking paint. Other major damage occurred on Saint John’s

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193 Changes done by the artist
right eye and visible cracks were apparent on his hands and the surrounding foliage.\textsuperscript{195} After the restoration in 1949, Davies applied a layer of varnish to the painting in an attempt to keep the work from deteriorating further.\textsuperscript{196}

A second restoration on the National Gallery’s \textit{Virgin of the Rocks} took place in November of 2008. After an eighteen-month in-depth process, the painting was finally able to return to the walls of the Gallery. The varnish applied by Martin Davies in 1949 had slowly become unstable and began yellowing in certain areas, requiring the need for the newest cleaning. The varnish caused fine cracks particularly on the faces of the figures and the waxy nature of the varnish was an open-invitation for atmospheric dirt.

As a result, the artist’s shading and linear perspective were no longer visible or able to be appreciated. The new Director of Conservation, Larry Keith, collaborated with curator Luke Syson along with other conservators and scientists to take on the restoration of the painting. The conservationists removed the majority of the varnish but left a very thin layer to ensure the remaining paint would not continue to crack or peel. The removal immediately revealed results; the saturation of the paint became clear once again, the tonal range was apparent and the three-dimensional modeling was enhanced. The cleaning also reconfirmed the painting was incomplete as the amplified saturation of paint unfortunately exaggerated the differences between the finished and unfinished areas. The most noticeably, incomplete sections were the left foot and blessing hand of the Christ Child and Gabriel’s hand used to support the Child’s back. The angel’s hand was the worst of the areas, as it was in its underdrawing state with no over-painting. The National Gallery believed these incomplete areas were done by Leonardo and not his

\textsuperscript{195} Martin Davies, \textit{Earlier Italian Schools: National Gallery Catalogues}, 261.
\textsuperscript{196} Chris Morton, e-mail to author.
assistants. The curators insisted the work was too refined to have been done by someone other than the master artist. They theorized the work was left incomplete because the lighting in the Church of the Immaculate Conception did not allow Leonardo to see his painting clearly.\textsuperscript{197} However, with the knowledge available on the great artist, it would seem unlikely he would have allowed poor lighting to keep him from finishing a painting he cared about. Against former National Gallery director Martin Davies, current Curator Luke Syson has admitted that Leonardo’s pupils did play a role in the creation of their Virgin of the Rocks. However, his conclusions state the student’s work was minimal, unlike other theorists, such as David Alan Brown, who believe the assistants painted a large portion of the second panel.\textsuperscript{198} From a historical perspective Syson and Davies’ beliefs are accurate. In the Renaissance, the artist who formulated the design concept and approved the final work was considered its author. For the National Gallery’s painting, Leonardo did apply Composition B, which was the blueprint for the painting. And scientific analysis of the final painted layer proves his fingertips and signature brush strokes were used to apply the details in the Virgin’s and Christ Child’s faces. The formulations of Composition B, along with the finishing details applied at the end of the commission, in historical standards, conclude Leonardo was the creator of the National Gallery’s painting. However, from an art and museum perspective, Leonardo’s actual painted work was minimal on the second Virgin of the Rocks and does not qualify him to be named as the sole creator of the painting.


\textsuperscript{198} Ibid.
After the completion of the National Gallery’s cleaning of their painting, a new frame was commissioned to enhance the renewed colors and tones. Peter Schade, Head of Framing at the National Gallery, incorporated parts of a sixteenth-century frame built in northern Italy with new woodwork inspired by the style of Giacomo del Maino. The restoration of the painting also opened a new conversation about the pigments used by the artists. New analytical methods allowed scientists and curators to identify a red-lake pigment, known to have been used by contemporary artists, but never found on any of the other National Gallery’s Renaissance paintings. The pigment was added to the extensive list of Leonardo’s techniques, methods and materials that he utilized in his workshop far before any other artist in his time.199

Prior to the last restoration, Luke Syson worked closely with gallery researcher Rachel Billinge to undertake an extensive look at the underdrawings of the Gallery’s Virgin of the Rocks. Preliminary work began in 2005, with the intention of using advanced technology to view the primary and underlying work on the painting. In doing so, the researchers hoped to find clues to why a second version of the painting was created and who was responsible for executing the majority of it. The use of infra-red technology and x-ray scans allowed the researchers to view two underdrawings referred to as Composition A and Composition B. Composition A was the initial cartoon on the panel. After revisions, Composition B was placed over it, followed by the final paint application.200

Composition A was not visually clear to the curators as it is obscured by existing images and drawn beneath damaged sections of the canvas. Only the areas where the paint was originally thin or not applied at all would reveal the underdrawing. Where the drawing is visible, the researchers discovered the figure of a human kneeling in front of a rocky landscape. This was placed in the same spot as the visible painted Virgin. Luke Syson and Rachel Billinge describe their discoveries regarding the underdrawings in the article “Leonardo da Vinci’s use of underdrawings in the Virgin of the Rocks in the National Gallery and Saint Jerome in the Vatican.” The researchers found the head of the figure in the underdrawing is in a three-quarter view, turned to the right, with only the left eye visible. The rest of the figure’s face is blocked by the existing paint used for the Virgin’s hair. The figure’s left hand is held to its breast and the right arm and hand are extended so far out to the left that the hand’s first finger touches the edge of the painting. Based on its positioning, Syson and Billinge believed the figure is kneeling. Unfortunately, the infra-red rays could not detect a torso or legs within the underdrawing. This was a result of the thick, painted layers coated on top of the existing Virgin’s robes. The outline of a cloak is suggested on the unknown figure and looks to be thrown over the right shoulder, flowing left, and descending in vertical folds. This is visible through the trim of the Virgin’s actual robe where the paint isn’t as thick. The background in the first composition shows a rocky region above the figure, indicating a cave-like setting. A cluster of leaves rising over the character’s right arm indicates a possible plant growing from the rock’s crevice.201

Paint samples were taken from Composition A at the figure’s finger nearing the painting’s edge and from the cloak included in Composition B. A third paint sample taken in 1967 from the area of the Virgin’s cloak lining in the final painted layer was also re-examined. Syson and Billinge’s samples showed the first design was drawn straight onto the gesso, using “a medium which contains a vegetable carbon black.” 202 They also discovered “a moderately thick, oil-based light grey imprimitura (priming layer), of white lead with small particles of carbon black, was then painted over the design.” 203 The researchers identified certain elements of the first composition were drawn using different techniques. The rendering of the figure’s head was completed using a liquid-based tool that produced lines ranging in width and severity. When examined closer, they found the liquid used by the artist left puddles at the end of each stroke, showing a thicker brush was implemented in the creation of the figure’s head. The lines of the underdrawing’s left hand are similar to those of the head accept slightly broader. This indicated a thick brush was also used for the inception of the hand. The outer perimeter of the figure’s hand and first finger are detailed by “short, broken and over-lapping lines.” 204 On first examination, the researchers thought they were formed by a continuous outline indicating the painter went over an existing outline in a material not detectable by the infra-red technology. The unsteady lines may have been a result of the artist joining fixed points like those created when a cartoon is transfer onto panel via pouncing. 205 Although no carbon pounce marks were visible, they could have been easily

203 Ibid.
204 Ibid.
205 Pencing is the process of pricking holes on the canvas to create a shape. Often used when copying a cartoon or drawing.
brushed off of the gesso.\textsuperscript{206} The facial features in Composition A were created through pouncing, revealing there was no use of improvisation in its creation. The concept of pouncing is similar to that of connecting the dots, which contrasts with the relaxed lines used to create the draperies in Composition A. Their relaxed appearance indicated a thicker, endowed brush was used for the application, similar to the brush used to create the cursory landscape and the figure’s right arm and hand. The paint samples taken from Composition A confirmed the drapery lines were made from the same liquid elements as the figure’s finger located at the edge of the canvas. Microscopic analysis helped confirm this by dismissing the artist used black chalk for the drapery lines. This was based on the lack of wood charcoal or graphite in the samples, both found in the remnants of black chalk. The medium was suspected due to Leonardo’s previous use of black chalk in unfinished areas of his \textit{Virgin and Child with Saints Anne and John the Baptist}, which were also created with uneven, sketchy lines.\textsuperscript{207}

The Windsor Royal Collection owns two studies associated with the original composition (fig. 28) for the painting. The first shows the Virgin’s left hand hovering over the Christ Child as He reaches up to her (fig. 29). The compositional sheet includes an arch-topped Nativity or Adoration, including Saint John. The second sheet depicts the Virgin with her hand to her breast as the figure does in Composition A. The sheet also shows a drawing of an old man closely resembling the main character in Leonardo’s unfinished \textit{Saint Jerome} in the Vatican. Unfortunately, the metalpoint on blue prepared paper has been so faded it is near impossible to reproduce. In both the second Windsor study and Composition A, the main figure is placed in the center of the scene with its

right arm out and hand above the rest of the body. If the figure in Composition A was to be the Virgin, the placement of her at the top left of the panel would have allowed her to look down to her Son, who would have been positioned in the right corner of the painting. Although no Christ Child is shown in Composition A, the existing over-paint may have stopped the infra-red technology from detecting it. Leonardo often worked on simultaneous projects and the existing Windsor study containing elements from the second Virgin of the Rocks and Saint Jerome alludes to this.208

The use of the figure’s left hand to breast is reminiscent to Cecilia Gallerani’s right hand in her portrait The Lady with an Ermine (fig. 30). Though the fingers are different, the gesture may have been developed specifically for Cecilia who required it to keep her animal in position. Whether the inception of the gesture was with the portrait or not, Leonardo quickly reused it for Saint Philip in the Last Supper. The young saint’s position also matches the figure in Composition A, but inverted (fig. 31). The two figures are so precise that when the head of Composition A is flipped horizontally and laid over the painting of Saint Philip, their nose, eyes and upper lip match exactly. The only change is the scale of the figures; Saint Philip’s head is thirty-five centimeters high while the head in Composition A is seventeen centimeters. The Windsor Collection also includes a study of a young, beautiful man drawn in black chalk (fig. 32). It had been assumed the drawing was preparatory work for the Apostle, but the figure in Composition A seems to better match for Saint Philip in the Last Supper. The researches at the National Gallery have inferred the black chalk drawing at Windsor may have been for Leonardo’s Adoration of the Magi (fig. 33).

Fig. 28. *Composition A*, outline diagram of the first underdrawing of fig. 13. Reproduced from The National Gallery.

Fig. 29. *Designs for the Nativity or Adoration of Christ*, c.1491. Silverpoint reworked with pen and brown brush on pink prepared paper, 19.3 x 16.2 cm. MET Museum. Reproduced from the Roger Fund.

Fig. 30. *A Lady with an Ermine*, c.1491. Oil on panel, 54.8 x 40.3 cm. Krakow, Czartoryski. Reproduced from Wikipedia.
Fig. 31. Head of Saint Philip in the *Last Supper* with diagram of the underdrawing of the figure’s head in Composition A reversed and overlaid, c.1493. Tempera and oil on prepared surface, 460 x 880 cm. Milan, refectory of Santa Maria delle Grazie. Courtesy of the National Gallery.

Fig. 32. *Study of a young man*, c.1492. Black chalk, 19 x 15 cm. Windsor, Royal Library (RL 12551). Courtesy of Her Majesty the Queen Elizabeth II.

Fig. 33. *Adoration of the Magi* (detail), 1481. Oil on panel, 243 x 246 cm. Florence, Galleria degli Uffizi. Reproduced from World Wide Art Gallery.
Comparing the two, the innocent Virgin’s face matches that of the young man in the drawing. If the Windsor drawing was used for *Adoration of the Magi*, then the abandoned cartoon for the left hand to breast gesture from Composition A was inverted by Leonardo and reused for Saint Philip in his *Last Supper*. The problem with this theory however is Leonardo did not start using black chalk for his studies until 1490 and the *Adoration of the Magi* was commissioned in 1480 while Leonardo was still in Florence. The painting was left behind in an incomplete state when he relocated to Milan. It is therefore impossible for the study of the young boy in the Windsor collection to have been a prerequisite for the *Adoration of the Magi* as the National Gallery has inferred. The disassociation between the pre-Milan painting and the study does not conclude that the black chalk drawing had to be for the *Last Supper*. It may have been a study not used for a painting or it, along with Composition A, could have both been design concepts for Saint Philip.

Leonardo’s inclination for recycling his cartoons and concepts provides a timeline for his work in the 1490s and indicates the starting date for the London’s *Virgin of the Rocks*. The motif of the left hand to breast was used in *The Lady with an Ermine* portrait shortly after its creation on the Windsor sheet depicting the Virgin in the same pose. The development of Composition A is chronologically connected with the creation of the *Last Supper* and *Saint Jerome*; a connection that determines the starting dates for all three paintings. The *Last Supper* is dated between 1495 and 1497 but applies to the painting’s completion, not when it began. The painting likely began after the expansion of the Church of *Santa Maria della Grazie* was finished. On March 29, 1492 Ludovico Sforza

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announced a new mausoleum and choir were to be added to the Church that would be the future site of the *Last Supper*.\(^{210}\) It is this author’s conclusion that Leonardo developed the ground work for the massive painting located on the north wall of the refectory of *Santa Maria* when Ludovico informed the artist of his interest in the site. If Cecilia Gallerani’s portrait was completed immediately after Leonardo drew the Windsor study of the Virgin, then Leonardo’s beginning work on the *Last Supper* and revived work on the Confraternity’s commission both began in 1493. This would also coincide with the date Leonardo sold the first painting to Ludovico. Establishing a clear timeline based on these assumptions, the two Windsor studies of the Virgin should be dated to early 1491 along with Cecilia Gallerani’s portrait. Ludovico Sforza broke ground for *Santa Maria della Grazie* in 1492 informing his court artist to develop an idea for the north wall. Therefore, Leonardo began work for the *Last Supper* and the second painting of the *Virgin of the Rocks* in 1493.

**Cartoon Application and Composition B**

Leonardo often used an existing drawing or cartoon to transfer his ideas onto a wooden panel. Fragmented notes from Leonardo’s 1490 to 1492 manuscripts have been translated by Jean Paul Richter in *The Literary works of Leonardo da Vinci*.\(^{211}\) The manuscripts provide detailed descriptions and step by step instructions on the transfer of a cartoon over to a panel. After a complicated procedural process of preparing the base of the panel, he called for primer to be laid over the cartoon then pounced and outlined. The process of transferring a cartoon to fresco developed simultaneously, however Leonardo

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\(^{211}\) Jean Paul Richter, “Supplement to Giovio’s *Leonardi Vincii Vita*,” 372.
was the pioneer of the technique for panel painting. Unfortunately the transfer process listed in his notes may have been taken too literally by its interpreters. He may have intended his instructions to be easier, imitating the traditional method of combining two existing cartoons to create a whole new composition. Or he intended for an entirely separate cartoon to be conjoined with a previously existing cartoon. For example, a close examination of Leonardo’s *Saint Jerome* revealed the painting was completed by conjoining two existing layers; one directly on the gesso and the other placed over the priming layer. The first drawing was applied with a standard brush on gesso in a black liquid medium. A pale priming layer, similar to that on the actual London painting, was applied over the first drawing which made the existing lines appear to be gray. The primer’s application was uneven and thick in some areas more so than others. This caused the drawing to appear sketchy and improvised instead of heavily planned as it was.

The direction of the head and out-flung arm in Composition A (fig. 34) is emulated in Leonardo’s *Saint Jerome* (fig. 35). The similarities suggest the artist copied the original underdrawing from the second *Virgin of the Rocks* and then transferred it onto the panel for *Saint Jerome*. The application may have been achieved through the use of two separate cartoons, one for the head and one for the arm, and the rest of the body achieved by free hand improvisation. However Leonardo’s method of transfer for Composition A cannot be authenticated as there are no visible signs of pouncing on the painting. The marks may have been dusted off the surface or formulated with red chalk.

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which is not detectable through infra-red technology. It is also possible Leonardo could have used a carbon-copy technique which involved rubbing over existing lines of a drawing and transferring them onto another panel using black chalk. Although no such lines were found with the infra-red x-ray, if he had used red chalk as previously stated, they would not have been seen. Red chalk lines were found on the underdrawings of the Last Supper so Leonardo was known to have used the medium. Considering the similarities of Saint Philip in the Last Supper, Saint Jerome and the figure in Composition A, Leonardo may have utilized red chalk when copying both images. It is likely he transferred each element individually, such as the head or arm. The process would have been easy, accept for the scaling required as both the Last Supper and Saint Jerome were larger than Composition A.  

Fig. 34. Composition A (detail of fig. 25)  

Fig. 35. Saint Jerome (detail), c.1480. Tempera and oil on panel, 103 x 75 cm. Vatican City, Monumenti, Musei e Gallerie Pontificie. Museum Photo.

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Composition B is made of a series of fine lines whose width is much more consistent than those in Composition A. The drawing style of the second composition is sketchy and spontaneous in some parts and completely controlled in others, but confident throughout. As paint samples have been hard to obtain from Composition B, there has been no way to determine where the majority of the drawing actually lies within the layered structure of the painting. However, some of the lines, particularly those within the rocks, are broken up over the ridges and troughs. This was formed by the brushstrokes on the gesso and also seen in Saint Jerome. It is probable Leonardo applied paint below the primary layer of Composition A and above Composition B, leaving the second standing out over the first. The visible lines in the second composition are in unfinished areas of the top layer or where the paint was particularly thin; the upper, left arm and inner elbow of the Christ Child. When viewed, the underdrawing is revealed to have been created with a liquid medium, applied with a pen or the point of a fine-lined brush.215

The rocks and plants in Composition B were drawn almost entirely freehand with minimal hatching marks. This suggests the use of an existing cartoon to draw the rocks at the right of the Virgin’s head. The shifting contour lines that make up the right leg and foot of Saint John and for both the Christ Child’s arms show Leonardo established their final positions on the panel itself. The drawing style used for the children is contradictory to the overly planned external and internal contours of the Virgin’s and Gabriel’s faces. Numerous changes were made to the painted surface such as Gabriel’s wings that were redrawn to sit further back, mimicking the angel in the Louvre’s painting. The majority of the other changes, however, are different from the initial panel. A scrubby plant growing

below Saint John included in the Louvre’s painting was originally drawn in Composition B but cut from the final painted layer. This trend continued with the stalagmite rock formations over the Virgin’s head, distant sea views visible between the rock formations, curly locks of hair cascading down Gabriel’s face and the extended hair length of the Virgin. These were all elements included in the Louvre’s *Virgin of the Rocks* and Composition B, but dismissed from the final version of the second painting.\(^{216}\\) 

When the researchers at the National Gallery examined an image of the Louvre’s *Virgin of the Rocks* directly over the London painting (fig. 36) they observed three areas that were almost identical: the outlines of the Virgin’s face except for her eyes which are four millimeters higher in the London painting (fig. 37), the Virgin’s right cheek, and Gabriel’s face if the form in the London panel was rotated slightly clockwise (fig. 38). The one area that is completely identical in both the Louvre’s painting and Composition B is the outline of the cavern set in the background. The concordance of the second composition to the Louvre’s painting suggests Leonardo may have used pre-existing drawings to pull from for the designs. Unfortunately, there were no visible pounce markings to determine if the work was copied. The figure’s extremities and the majority of their bodies were based on the figures painted in the first *Virgin of the Rock*. However the artist opted for free variation in some areas instead of using existing cartoons. This choice of freehand did not pay off in all respects, such as the figure of the Christ Child, whose form looks significantly better in the first paintings. The infra-red technology showed the arms of the Christ Child in Composition B were modified from their original transposition to the work completed before the final painted layer. It is likely the drawing

was created from an existing cartoon but revised using freehand techniques in the same medium as the rest of the underdrawing. 217

Fig. 36. Infra-red reflectography scan of Composition B and second Virgin of the Rocks (fig. 13)

Fig. 37. Composition B (detail infra-red reflectogram mosaic of fig.13., showing the head in Composition A above the painted Virgin). Courtesy of the National Gallery.

Fig. 38. Composition B (detail infra-red reflectography scan of fig.13., showing the angel Gabriel). Courtesy of the National Gallery.

Some of the preparatory cartoons for the first *Virgin of the Rocks* are also in the Louvre’s permanent collection. The study of Saint John was drawn in metalpoint then copied over in pen and ink. The style is similar to the production of Composition A and B in the National Gallery’s painting. However, no date for the drawing has been confirmed. The outlines of the drawing are pounced, verifying it was used for a painting at one point. It can be safe to conclude it was for the Louvre’s panel because the two figures match perfectly, except the cartoon is lit right to left and the painting left to right. Clearly the cartoon was abandoned for the figure of Saint John in the London painting however it may have been adopted for the figure of the Christ Child. This is a possibility considering the increase in size and repositioned angle of Christ’s head, matching the cartoon for the first Saint John. The head of Christ in Composition B was actually painted instead of being outlined only in chalk. This allowed the National Gallery to gather x-ray examinations. They revealed Leonardo followed the cartoon of Saint John for Christ’s chin and lower cheek. But these elements were replaced in the painted layer with Christ posed in profile.

The two compositions below the National Gallery’s painting reveals Leonardo had intended a vastly different landscape than what the painted layer portrayed. Indicated by the inaccurate background actually used in the London version, Leonardo may have suspected his students would not have been able to replicate his new vision. Existing cartoons were most likely used, as with the painting of the Christ Child and Virgin’s heads. The background rock formations are similar in overall shape, but the detailing is where the two paintings really differ.\(^\text{218}\)

Leonardo’s Studies and Drawings

The existing cartoons that were used for both paintings of the *Virgin of the Rocks* are helpful in determining Leonardo’s painting process and his teaching methods. Pouncing marks left on the drawings indicate they were used for stencil work on a painting at some point. However other cartoons and studies resembling the figures from the *Virgin of the Rocks* exist without the visible pouncing and may strengthen the argued dates for the beginning of the second painting. Examples of the non-pounced cartoons are in the collection of the Louvre, the Royal Library of the Windsor Collection, the *Biblioteca Ambrosiana* in Milan and the Arundel MSS in the British Museum.

The *Codex Atlanticus*, Leonardo’s most detailed documentation of his studies, resides in the *Biblioteca Ambrosiana* in Milan. It includes 1,119 sheets of twelve volumes, covered by 1,700 drawings and illustrations that span over forty years of work from 1478 to 1519. The text includes a list of thirty-four works in progress or completed by Leonardo at the time. The composition date for the list is 1483 based on Leonardo’s handwriting and what was excluded from it. Leonardo’s calligraphy at the time of the inscription is an example of his writing style prior to 1485. After that, his signature changed along with his artistic methods. The list of his active or completed paintings does not include the *Virgin of the Rocks*. This indicated the notation was entered while he was still living in Florence before his move to Milan in 1482.\(^\text{220}\)


The Arundel Manuscript or Codex Arundel,221 is a series of Leonardo’s miscellaneous drawings and notes that have been bundled together. At the beginning of the manuscript it says, “begun at Florence in the house of Piero di Braccio Martelli on the 22nd day of March, 1508.” Despite the quote, the contents are varying in dates and in no particular order. The sheet most useful to the subject of the Virgin of the Rocks is the one with the earliest date of 1483. The page differs from the rest of the studies and appears as a waste piece of parchment that had been accidently attached to the others. The verso or back of the sheet is covered in elaborate, ornate, spidery, Gothic script; characteristics of Leonardo’s handwriting in his early Florentine career. A drawing of a kayak similar to his preliminary drawings for military engineering in also included on the page. On the opposing side of the paper or recto, the drawings are so faint they are only visible through the use of a strong light or ultra-violet ray. When seen, the figures drawn on the pale, blue, prepared paper are similar to the figures in the first Virgin of the Rocks.222 The Arundel MSS 256 recto (fig. 39) includes drawings of babies that resemble the children in the Louvre’s painting. The right foot placed immediately below the child’s head matches the right foot of the Christ Child. The lower half of the kneeling baby on one knee coincides with Saint John and the left foot in the center of the sheet is that of the Christ Child.

The Windsor Collection holds two studies by Leonardo including children resembling those in the Louvre’s Virgin of the Rocks. Studies of a baby No.12569 (fig. 40) was drawn in metalpoint and pen and ink and Study of a baby No. 12568 (fig. 41) was

drawn in red chalk. Historians Kenneth Clark and A.E. Popham have argued these studies should not be linked to the first \textit{Virgin of the Rocks}. Clark believed they were not the work of Leonardo, as the crowded nature of the drawings was not typical for the artist.\textsuperscript{223} Popham associated the Windsor studies to Leonardo, but only related to the second \textit{Virgin of the Rocks}, if at all.\textsuperscript{224} It is this author’s opinion both of their theories are incorrect. The children drawn on the two sheets are almost identical to the children in the first panel. It is doubtful Leonardo would have created new drawings for the second painting when he, or his assistants, could simply utilize the first panel’s cartoons. The two historians do not present other studies for the children in the first painting, further indicating the Windsor drawings were meant for the commission. Also, the figures in both of the studies accurately match the Louvre’s painting. The drawing \textit{Head of a child in three-quarter view} (fig. 42) from the Louvre’s collection, could be a study for the head of Saint John in the first painting by Leonardo, as both images match in size. The study is an amazing example of the complex techniques and extensive graphic abilities Leonardo was capable of producing in the 1480s. He implemented silverpoint reworked in pen and ink, brush and brown wash, and then highlighted it all with white gouache on gray-blue prepared paper. The drawing reveals prick and pounce marks around its edges, indicating it was used as a cartoon for a painting or was copied by his pupils for one of their individual works. In the Devonshire Collection, there is an exact copy of \textit{Head of a child in three-quarter view} by Leonardo’s pupil, Boltraffio. Therefore the pouncing is not clear evidence the cartoon was used for the Louvre’s \textit{Virgin of the Rocks}.\textsuperscript{225}

\textsuperscript{223} Kenneth Clark, “The Madonna in Profile,” 136.  
\textsuperscript{224} A.E. Popham, “The Reappearance of Some Leonardo Drawings,” 128.  
**Fig. 39.** (right) *Study of Infant and Foot of Adult*, from Arundel MS, c.1480. Metalpoint with white heightening on blue prepared paper, 31.3 x 23.3 cm. London, British Museum. Reproduced from the Museum Trustees.

**Fig. 40.** (above) *Studies of a baby*, c. 1480. Metalpoint reworked with pen and ink on prepared paper, 17.1 x 21.8 cm. Windsor, Royal Library (RL 12569). Courtesy of Her Majesty the Queen Elizabeth II.

**Fig. 41.** *Study of a baby*, c.1480. Red chalk, 13.8 x 19.5 cm. Windsor, Royal Library (RL 12568). Courtesy of Her Majesty the Queen Elizabeth II.

**Fig. 42.** (above) *Head of a child in three-quarter view*, c. 1483. Metalpoint reworked with pen, brush and brown ink highlighted in white gouache on prepared paper, 13.4 x 11.9 cm. Paris, Louvre Museum. Museum Photo.
Chapter 6
Museum Protection during World War II

The Louvre during World War II

In 1938 impending war prompted a large-scale evacuation of the precious public collection of art within the Louvre. The curator’s first consideration was the care and safety of the prized works. Different parts of the Museum were organized as preparation stations for the paintings to be crated and shipped out of Paris. The painting department used the Salle des Caryatides on the ground floor near the courtyard for this task and the location for the packaging of the Virgin of the Rocks. Full crates of paintings and sculptures were loaded onto trucks then driven to peaceful French country sides not prone to Nazi attacks or bombings. Records in the French Archives list a total of thirty-nine truck convoys that left Paris packed with what the Louvre considered their crown jewels. These jewels included the works of Leonardo and Raphael. The most precious items, including the Virgin of the Rocks and Mona Lisa, were sent to Chambord in the first convoy on August 26, 1939 and by September 3rd, the Museum was empty.\footnote{Barbier Muriel, Assistant in Conservation at the Louvre, e-mail to author, July 15, 2010.} The original shipment to Chambord was moved to the Louvigny, then the Abbaye de Loc Dieu, the Musee de Montauban and finally to Montel. The relocation efforts were a result of restricted traveling opportunities, limited storage space and general safety precautions to avoid Nazi interception. During that time, it was the job of Head Curator, Jacques Jaujard, to keep track of each painting’s location, as well as maintain the safety and
proper conservation methods required for the changing weather and temperatures during the voyage.227

The crates included sculptures, decorative works and over 3,690 paintings. The time allotted to pack and relocate that number of items was a major feat in itself. All thirty-nine convoys traveled through already crowded roads in Paris, joining those desperately attempting to escape a city facing impending occupation. When Hitler invaded France, the Louvre became a set up station for Nazi soldiers. In September of 1940, the Nazis reopened the Louvre in a small attempt to bring back an element of culture to the remaining Parisian people. The partial opening was a failed attempt to provide a false sense of security to the city. In fact, the majority of the Museum’s halls were left empty. After the war ended, the Louvre underwent a major renovation and gradually reopened to the public between 1945 and 1947. The museum miraculously maintained ownership of their most precious works during the course of the War. This was accomplished through the efforts of the Museum staff and volunteers who worked tenaciously to keep the art safe during their relocation and storage.228

In May of 2009 the Louvre held a photographic exhibition entitled Le Louvre Pendent La Guerre, Regards Photographiques or The Photographic Views of the Louvre during the War, held in the Salle de la Maquette of the museum. The exhibition focused on photographs depicting the Museum employee’s efforts to salvage art work prior to World War II. The images showed the workers preparing the paintings for travel and the trucks transferring them to the French countryside. Although the Virgin of the Rocks was

not included in these photographs, other works by Leonardo, such as the *Mona Lisa*, were featured in the exhibition. The removal and protection of these paintings is best known from the diary of Rene Huyghe,\(^\text{229}\) the curator of the Renaissance department at the time, and his assistant Germain Bazin.\(^\text{230}\) Their memories were the inspiration and source of the credible information used for the exhibition.

The photographic show included fifty-six images, both French and German, taken between 1936 and 1947. Most of the exhibited images had never been on display previously. The show focused on the excavation of the Louvre’s paintings prior to the War, along with the re-installation after the War’s end in 1945. The exhibition included the photographs of Pierre Jahan, obtained by the Louvre in 2005. Five photographs from the Koblenz municipal archives depict the Nazi’s use of the Eastern Antiquities section in the Louvre. These rooms were commandeered by German officers and used to hoard and inventory stolen art from once wealthy Jewish families and art dealers in France. The Eastern Antiquities section along with the area known as *Jeu de Paume*, were blocked off to Museum personnel. Photographs in the exhibition focused on the empty halls from the *reopening* of the Museum by the Nazis in 1940. The itineraries posted by German officers detailing their future plans for the Louvre were included in a selection of photographs. Other images on display were taken by amateur photographers or Parisian press in the 1940s. The additional photographs helped fill any gaps left by the work of photographer Jahan.\(^\text{231}\)

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Coinciding with the photographic exhibition at the Louvre was the Chambord show *Chambord during the Second World War* that ran from October of 2009 to May of 2010. The Chambord exhibition displayed primary documents from the war such as contracts, requests and correspondence between the Museum officials and Nazi leaders. These documents provided a time-line for visitors to follow, detailing the events that occurred at Chambord during the war years.\textsuperscript{232}

**The National Gallery during World War II**

With the threat of a German invasion and bombing on London, director Kenneth Clark of the National Gallery relocated a select group of the Gallery’s masterpieces to a safer location. Preparing for a world war, fifty paintings were transferred from the Gallery to the University of North Wales in Bangor on September 30, 1938. This coincided with the signing of the Munich Accord between Adolf Hitler and Neville Chamberlain, alluding Britain would be safe from invasion.\textsuperscript{233} Believing war had been averted, the paintings were brought back to London the very same day. While aggression grew, less than a year later Britain declared war on Germany and the entire National Gallery collection was evacuated. The packing and relocating of crates took ten days, leaving the Gallery empty by September 3, 1939 when war had been officially declared. Due to the size of the cargo and the security required, the paintings were divided between the University of North Wales in Bangor, the National Library in Aberystwyth, *Caemarvon* Castle, *Trawsgoed* (Crosswood), *Penrhyn* Castle and Gloucestershire. The

\textsuperscript{233} Christopher Morton, e-mail to author.
locations were only temporary while long-term destinations for the collection were still considered.234

The imminent invasion of Britain by the summer of 1940 gave Kenneth Clark reason to feel the National Gallery’s treasures were unsafe scattered across Wales. He met with Prime Minister Winston Churchill to request the Gallery’s work be sent to Canada. However, impending war made naval transport to North America or any other location extremely dangerous and Clark’s request was denied. Luckily, the director discovered an unused slate mine near Blaenau Ffestinog in Manod, that would adequately suit the painting’s safety needs. High explosives were detonated to enlarge the entrance of the mine to accommodate the largest of the paintings. Multiple brick bungalows were built within the cave to protect the paintings from environmental variations such as temperature and humidity. By 1941 the entire collection was residing in its new underground home which resulted in an unexpected art conservation discovery. The unusual situation forced Kenneth Clark to research and study new ways to maintain the integrity of the work while in an uncontrolled environment. Valuable discoveries were made regarding temperature and humidity control, along with cleaning necessities that would influence the future of conservation and care in the National Gallery once the paintings were returned. The Assistant Keeper in charge of the paintings in Wales was the young Martin Davies, well-known future National Gallery director and author of the Gallery’s most famous catalogues. The up-close interaction Davies had while studying the collection provided him with the rare opportunity to complete his research for the permanent collection catalogues. By the end of 1945 German troops were driven from London and the paintings were able to return to the National Gallery. The slate mines in

Manod were reserved by the British Government for further use during the Cold War and were still available to the British until the early 1980s.\textsuperscript{235}

\textsuperscript{235} Suzanne Bosman, \textit{The National Gallery during War Time}, 113.
Chapter 7  
Museum Education and Exhibitions

The National Gallery’s Future Exhibition

Beginning in November 2011, the National Gallery will present what is likely to be a blockbuster exhibition entitled *Leonardo da Vinci: Painter at the Court of Milan.* The National Gallery claims this exhibition will be “the most complete display of Leonardo’s rare surviving works ever held.”²³⁶ It will bring together the artist’s works provided on loan from international locations, allowing paintings never before seen in the United Kingdom to be on view. Claiming it will be the first exhibition of its kind, the show will feature borrowed works *La Belle Ferroniere* from the Louvre, *Madonna Litta* from The Hermitage and *Saint Jerome* from the *Pinacoteca Vaticana* in Rome. The recent eighteen-month conservation of the Gallery’s *Virgin of the Rocks* inspired this exhibition. During the process, the curators marveled at Leonardo’s drive for perfection in his paintings. Because of this, they set forth to create an exhibition focused on the artist’s work created while he lived in Milan and under the employment of Ludovico Sforza in the late 1480s and 1490s. The exhibition will follow “Leonardo’s pursuit for perfection in his representation of the human form,” as well as nature.²³⁷

The exhibition will close with a full-scale reproduction of the *Last Supper* on loan from the Royal Academy at Windsor. Alongside it will be the original studies drawn by Leonardo for the actual painting. Viewers will be introduced to the artist’s methods and

²³⁷ Ibid.
have the opportunity to study his process of transforming a drawing into a classic work of art.\textsuperscript{238}

**Exhibiting Leonardo’s Studies**

The Louvre Museum has exhibited their *Virgin of the Rocks* on three occasions over the past seventy-five years. The first in 1935, the *Exposure of the Italian Art of Cimabue and Tiepolo*, was actually displayed in the *Petit Palais* in Paris instead of the Museum. The second, *A Tribute to Leonardo da Vinci* was exhibited at the Louvre in 1952. The third in 1972 was an exhibition of images featuring Saint Francis which included Leonardo’s initial painting for the Confraternity. The inclusion in this exhibition was based on the assumption that the panel once hung in the chapel dedicated to Saint Francis in the Church of *San Francesco Grande*.\textsuperscript{239} None of the above mentioned exhibitions or any of the shows at the Louvre have included educational programs. The Museum does offer visitors audio guides and each work is labeled with the artist, title, date and location of the piece’s creation. The three exhibitions featuring the *Virgin of the Rocks* did not produce a catalogue for reference nor does the Louvre’s website provide any further information regarding them. The Museum has informed the author that in order to obtain any information on the exhibitions prior to 2007, it is necessary to visit the Louvre in person and peruse their extensive library of history.\textsuperscript{240}

Leonardo’s drawings and cartoons for the *Virgin of the Rocks* were included in three recent exhibitions. *Leonardo da Vinci: Master Draftsman* was a highly regarded

\textsuperscript{238} Thomas Almeroth-Williams, ”Restored Leonardo Masterpiece Goes Back on Display at the National Gallery,” www.nationalgallery.org/uk/aboutus.

\textsuperscript{239} Vincent Delieuvin, e-mail message to author.

\textsuperscript{240} Ibid.
exhibition at the Metropolitan Museum of Art in 2003. The New York City show involved a wide array of the artist’s drawings and studies compiled over the course of his life. The exhibition curator, Carmen C. Bambach, referred to the display as “the first comprehensive show of Leonardo’s drawings ever exhibited in America.”\textsuperscript{241} It included one-hundred and forty-seven works total with one-hundred and eighteen of those confirmed by the curators to be the work of Leonardo. The drawings were on loan from more than twenty-five private and public collectors in Europe and the United States and required the use of six different rooms to separate the images by theme.\textsuperscript{242}

Appearing simultaneously with the MET exhibition, the Louvre opened \textit{Dessins et Manuscrits}, a show also focused on the drawings and manuscripts of Leonardo. The Museum’s exhibition was described by historians such as David Alan Brown, as being more complex than \textit{Master Draftsman} despite having fewer drawings.\textsuperscript{243} This complexity was accomplished by the Louvre’s distribution of the artist’s work into thirteen different rooms, presented chronologically and subdivided by themes. Curators Francoise Viatte and Varena Forcione presented \textit{Dessins et Manuscrits} and both contributed essays to the New York exhibition catalogue. The Parisian show was not new to the public as the manuscripts and drawings in the exhibition were from the Museum’s permanent collection on regular display. For the curators, this created the challenge of introducing new and exciting information and displays for works previously exhibited in the Museum. In an attempt to bring existing patrons back in the door and entice new guests,

\textsuperscript{242} Ibid.
Viatte and Forcione borrowed rare Leonardo items from other museums and collections. This was a difficult task because the curators required works never before seen at the Louvre. However, they succeeded in their acquisition, which raised the number of drawings in the exhibition to ninety. Extensive press kits were released, along with commercials and advertisements for the exhibition, increasing awareness and intrigue in the Parisian community. To this day, the master artist is seen as an important part of French culture. Leonardo’s decision to spend the last years of his life in their country and the impact of his intelligence on the surrounding community made the people of France appreciate Leonardo not only as an artist, but as a person.\textsuperscript{244}

Despite the curator’s efforts to increase excitement and interest in \textit{Dessins et Manuscrits}, the exhibition received negative reviews stating it was lacking and underwhelming in certain areas. For example, David Alan Brown wrote he found the section on anatomy underdeveloped. He commented on improper labeling for one of the drawings included in the drapery themed room. Françoise Viatte had attributed the work to Leonardo while Brown believed it to be by Verrocchio. The reviewer noted the curator had made the same error in a previous exhibition. He also reported the Museum’s lack of contextual information, which resulted in large gaps at the beginning and end of the show. Brown did comment on the exhibition’s positive aspects such as the Louvre’s attempt at educational thinking accomplished by combining Leonardo’s studies with the painting they eventually became. In the room dedicated to Leonardo’s early images of the Virgin, the Museum placed a study of a female in profile next to Leonardo’s \textit{Madonna Litta}. The drawing was used as the cover of the exhibition catalogue as well as the poster, and forced viewers to consider the process Leonardo took when creating his art. The

\textsuperscript{244} David Alan Brown, review “Leonardo Drawings: New York and Paris,” 613-614.
same comparative display was shown in the final room allotted to Leonardo’s designs for the *Virgin and Child with Saint Anne*. Compositional studies of drapery and rock formations were joined by its corresponding painting that had been removed from the *Grande Galerie* in the Museum for the exhibition.\(^{245}\)

Where the Louvre really stood out was their display of all twelve of Leonardo’s original manuscripts, on loan from the *Bibliotheque de l’Institut de France*. Largely unknown to the public, the notebooks were presented open to sheets of horses, arms and other subjects related to nearby paintings. The books were introduced and catalogued by Leonardo historian Pietro Marani. The exhibition also focused heavily on Leonardo’s studies of people in profile along with his grotesques. However, the only portrait included in the room was the cartoon of the prominent art contributor, Isabella d’Este.\(^{246}\) Forty-seven of the drawings in *Dessins et Manuscrits* were the work of Leonardo’s students or artists included in the *Leonardeschi* School. Most of those drawings were the property of the Louvre and previously displayed to the community. Curator Varena Forcione and reviewer David Alan Brown disagreed again on the artists responsible for certain studies included in the collection. For example, the Louvre attributed three specific drawings to Boltraffio while David Alan Brown argued they were the work of Marco d’Oggiono. According to Brown, *Dessins et Manuscrits* failed to live up to the MET’s *Leonardo da Vinci: Master Draftsman*. The purpose of the exhibition seemed unclear as a large part of the display had already been shown on multiple occasions. Only a small portion was new to the public, not including the works on loan.\(^{247}\) It would seem the Louvre’s ability to


borrow the twelve manuscripts from the French Library was the catapult for the exhibition and the rest of the work was added as filling elements to further entice guests to visit the already popular Museum.

The Universal Leonardo Project

The Universal Leonardo Project was intended to be the first scientific examination of Leonardo’s small collection of paintings. The purpose of the technical study was to examine each painting through x-ray and infra-red technology, similar to the process applied at the National Gallery. The researchers wanted to examine Leonardo’s artistic techniques, such as the use of his fingertips in his work. The leader of the project, Martin Kemp, also hoped the technical study would lead to European exhibitions featuring Leonardo’s work.\(^\text{248}\) This dream did come true in a five citywide, linked exhibition across Europe. The materials for each exhibition were not relocated out of fear of damage to the pieces. Instead, the linked locations were already in possession of Leonardo’s work with each venue representing a specific area of the artist’s studies. The purpose of the exhibitions as well as the Universal Leonardo website was to study Leonardo’s research and see how his experiments and experiences connected to one another. This is seen in his study of anatomy and mathematics and their direct relation to the human figure and perspective in his paintings. The museums that were part of the 2006 linked exhibition included the \textit{Uffizi} Gallery in Florence, The Ashmolean Museum in Oxford with three other locations creating the “Oxford Trail”, the Victoria and Albert

Museum in London, the Museum of Fine Arts in Budapest and Alte Pinakothek in Munich.\textsuperscript{249}

Art historians involved in the Universal Leonardo Project were Martin Kemp, Carmen Bambach, Claire Farago, Pietro Marani, David Alan Brown and Carlo Pedretti. Amongst them there were debates over which Leonardo works should have been included in the research. The main issues were if Leonardo’s unfinished paintings should have been part of the examination and if paintings that were still questioned as the work of the artist should be included. An example of this is the London Virgin of the Rocks. Martin Kemp compiled a list of twenty-two paintings, while Carmen Bambach’s list consisted of fifteen images. Oddly, paintings that have been attributed to Leonardo were not included on Kemp’s list, such as the Head of a Girl in Parma and Madonna and Child with a Pomegranate (painted with Verrocchio) and Tobias and the Angel, both in the National Gallery’s collection.\textsuperscript{250}

Kemp hoped the scientific research would result in international exhibitions after 2006. At that time, London’s Victoria and Albert Museum held Leonardo da Vinci: Experience, Experiment and Design, curated by Martin Kemp and Thereza Wells. The exhibition displayed Leonardo’s drawings and studies, split into four different groups. “The Mind’s Eye” focused on Leonardo’s study of the eye and how it related to the brain, along with the proportions of the human body. “The Less and Greater Worlds” studied the artist’s ideas on microcosm and macrocosm and the human body as a replica of the Earth and Universe, only smaller. The group showed studies of the heart, flowing water

\textsuperscript{250} Martin Bailey, “The Thumb Print of a Master?” 10.
and the waving of hair, paralleling nature with the human form. “Making Things” displayed Leonardo’s studies created while he was employed by Ludovico. The majority of these consisted of theater performance scenery, instruments designed for entertainment purposes, and architecture. “Force Highlights” was the most intriguing element of the show. It featured Leonardo’s studies for flying and mobile devices. The curators used computer programs to turn his drawings into active cartoons. This made the drawings look as if they were actually in motion, giving the museum-goer a deeper look into Leonardo’s purpose and mind. The exhibition attracted over 10,000 people and was well received by historians and museum visitors alike. In January of 2007, the exhibit came to an end, completing the Universal Leonardo exhibition program in Europe. The webpage for the Universal Leonardo Project continued to be updated through 2009 and provided news pertaining to Leonardo and his work. The last update listed the discovery of three new Leonardo drawings on the back of Virgin and Child with Saint Anne at the Louvre while it was being moved for restoration. The drawings were looked at with an infra-red camera and revealed to be a horse’s skull, a human skull and a study for an infant. The infant was most likely for the Christ Child in the painting on the other side.

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252 Adam Sage and Marie Tourres, “Three near-invisible drawings discovered on the back of a Da Vinci masterpiece,” The Times (December 19, 2008), http://entertainment.timesonline.co.uk/tol/arts_and_entertainment/visual_arts/article5365300.ece (accessed April 26, 2011).
Conclusion

Attempting to solve the mystery of the two *Virgin of the Rocks* has resulted in extensive research and lengthy debates. Through the use of historical information and scientific research I have reached three conclusions regarding the paintings. The questions most often asked that pertain to both versions of the painting are: why two versions exist, who painted the second version and where was the first version prior to 1625? I have argued a second painting was necessary as the initial panel was sold to Ludovico Sforza. This occurred for two reasons. The first was Leonardo and Ambrogio’s request for higher compensation for the central panel. This was not met by the Confraternity, so the artists allowed another person to purchase the painting. Ludovico was in need of a wedding present for his niece Bianca, who was engaged to Maximilian I. Bianca was a fan of the stories by the Egyptian Desert Fathers and those who wrote of Saint Francis. Leonardo’s incorporation of the *Apocalyptic Nova* into the painting, along with his parallel of Saint Francis and Saint John made for a personalized present for Ludovico’s niece. As Ludovico was Leonardo’s boss, he was able to make the artist finish the painting. This was a large feat considering no other large-sized painting in Leonardo’s oeuvre is in a complete state other than the first *Virgin of the Rocks*. The sale of the painting to Ludovico made a second version necessary. The first painting was purchased in 1493 which lead to the beginning of the second version later in the same year.

Leonardo applied underdrawings Composition A and Composition B on the panel for the second *Virgin of the Rocks*. He began with Composition A, but discarded it momentarily. Research performed by the National Gallery in 2008 determined
Composition A was a figure (most likely the Virgin) in a kneeling position. My assumptions are she was placed in the vertical center and off to the left side of the painting which allowed her to look down at the Christ Child. As the Virgin’s head is angled down and her eyes are looking to the lower right, I assume the Christ Child would have been placed to the low right in Composition A. This new composition was discarded for Composition B, which is similar to the first Virgin of the Rocks. However, the majority of the similarities were omitted in the final painted version except for the face of Gabriel. My conclusions on this are the second underdrawing was produced by Leonardo for his pupils to copy. He changed it from the original underdrawing because he knew it would be easier for them to recreate the initial version rather than start a new painting. Leonardo lacked the interest to reproduce a painting he had just finished, resulting in his student’s involvement on the second panel. This left Marco d’Oggiono, Giovanni Antonio Boltraffio and Ambrogio de’ Predis to paint the majority of the second Virgin of the Rocks. I have concluded Marco and Boltraffio painted the human characters on the panel and portions of the background, based on the similarities to their other painted works. Ambrogio was left with the responsibility of painting the majority of the background and foreground. This is evident through the inaccurate geological areas that would have been foreign to a portraitist. Also, he was unable to produce the hypernaturalistic style Leonardo so famously created in his own work. When Leonardo was forced to return to Milan in 1506, he supervised the completion of the panel and assisted in a few areas. This is evident in his fingerprints on the Virgin’s and Christ Child’s faces and a portion of the Virgin’s hair. However, the majority of the work should be attributed to the School of Leonardo.
While the work on the second painting had begun, the initial painting was still traveling with Bianca Marie Sforza. Although Bianca and Maximilian’s marriage was short-lived, her husband retained custody of the painting. Maximilian was a member of the House of Habsburg, along with Archduke Ferdinand II of Austria. Ferdinand was known for his love of art, particularly pieces that would be envied for their rarity or subject matter. The Archduke purchased and inherited his massive collection, including the Virgin of the Rocks from Maximilian I. The painting remained in Ambras Castle in Innsbruck at Tirol until Ferdinand’s niece Elisabeth married King Charles IX of France. Ferdinand also collected portraits of royalty. It is likely Ferdinand exchanged his Virgin of the Rocks for a portrait of Charles IX to add to his collection at Ambras Castle. The French King took Leonardo’s painting back to France, the same country the master artist spent the remaining years of his life. There it entered the French Royal Collection at Louvre Castle.

Despite extensive research on the two Virgin of the Rocks, there are a few topics that seem to have been discarded or barely touched. There is the possibility Leonardo was still in possession of the first Virgin of the Rocks when he died. Historian and archivist Grazioso Sironi states in his, “Salai and Leonardo’s Legacy,” that there were numerous paintings left in Leonardo’s home in France that were unknown to others beside Leonardo’s long-term assistant, Salai.\(^\text{253}\) It could be possible the artist held on to the initial central panel, as there is no concrete evidence proving otherwise. When he passed, the painting would have been taken by Salai, who may have sold to an interested buyer. This theory could only be proven true or false by extensive research on existing documents. Another issue regarding the Virgin of the Rocks is the two flanking panels

featuring music-making angels. The side paintings are often assumed to be the work of Ambrogio de’ Predis and Marco d’Oggiono. This is based on the style of the work compared to the assistant’s independent paintings. However, very little is mentioned regarding the modifications of the two panels or the fact that both angels face to the left. This would indicate they were not intended to sit to either side of the central panel but were both to be to the right of it. The only historian I have found that mentions this is Cecil Gould in an endnote for his “The Early History of Leonardo’s *Vierge aux Rochers* in the Louvre.” He writes, “both figures face in the same direction, so that it would be assumed that they were intended not as flanking figures but both for the same position on the right of a central feature.” Gould continues, pointing out the lower half of the angel’s bodies are the same, but the faces, colors and over-all style on the top half of the panels are completely contrasting.\(^{254}\) As previously mentioned, the angel in red represents the earlier Florentine style of Leonardo, suggesting Ambrogio de’ Predis was responsible for the work. The angel in green, however, is more characteristic of Gabriel in the second *Virgin of the Rocks*, indicating the artist was Marco d’Oggiono. Why do panels, each correlating to a different version of the central panel and facing the same direction, exist? Wouldn’t two full sets of the flanking angels make more sense? I believe further research into existing documents and scientific analysis by the National Gallery of their two panels would immensely help this perplexing topic.

In regards to the practices of the Louvre Museum and the National Gallery in London, their conservation efforts prior to the twenty-first century have, for the most part, created more problems for their *Virgin of the Rocks*. It was not until the mid to late twentieth-century that museum directors and curators discovered how to properly

\(^{254}\) Cecil Gould, “The Early History of Leonardo’s *Vierge aux Rochers* in the Louvre,” 221.
maintain the integrity of their paintings in uncontrolled environments. This education was made possible through Martin Davies and Kenneth Clark’s discoveries during the transportation of the National Gallery’s collection in World War II. Their observations of the paintings while in a slate mine presented them with an amazing opportunity to observe the work up-close in uncharacteristic elements. Their daily logs recorded how they were able to protect against strong winds, insects and deep cold. These journals have provided twenty-first century conservationists with knowledge otherwise unattainable.255

Selections of Leonardo’s paintings have also received scientific research that has aided in the museums’ conservation practices. The research provided information on the compounds and materials Leonardo used to create his paintings. This background information has enabled curators to apply proper lighting, clean with the correct chemicals and incorporate necessary retouching tools appropriate for the original mediums used to paint. Former Conservation Chief at the Louvre, Madeleine Hours has provided extensive research to aid conservationists in their careers. Her research in the late 1970s and early 1980s presented scientific data on seven of the Louvre’s masterpieces, through comprehensive testing and extensive documentation.256 Further advancements were made in 2008 when the Head of Conservation at the National Gallery, Luke Syson, took on an eighteen-month study of the Gallery’s Virgin of the Rocks. His conclusions broke ground on Leonardo’s specific painting techniques and enabled other researchers to truly understand the master artist’s process for painting.257

Despite both institutions’ advancements in conservation efforts, their progress in museum pedagogy is nonexistent. Professors John Falk and Lynn Dierking do admit art museums have been slower to adjust to the rise in education-based exhibitions over the last century.\(^\text{258}\) However, by including more visitor-friendly activities regarding education, museums like the Louvre can move past the visitors and tourists who come just because “it’s the Louvre.” French citizens could be excited to interact and learn about the artists they had previously seen and understand how beautiful works of art were created. Involving museum pedagogy was a large part of the interest in *Dessins et Manuscrits*, whether the curators were aware of it or not. The placement of Leonardo’s paintings next to their initial studies created the possibility of a mental interaction for the visitor. This was produced by having the chance to compare the two pieces and realize the artist’s process for themselves. The manuscripts included in the exhibition were the best example of education. By revealing Leonardo’s notebooks, visitors were able to delve into the mind of one of history’s Renaissance Men. By seeing Leonardo’s written words translated next his drawings on the same topic, visitors became enlightened on the thought process of one of the world’s most admired artists.

The National Gallery has hinted they are taking steps in their educational programs with the upcoming blockbuster exhibition *Leonardo da Vinci: Painter at the Court of Milan* debuting in November of 2011. The inclusion of the *Last Supper* next to its original studies force the visitor to think about the process Leonardo took to design his work, which is the focus of the exhibition. However, this method is identical to what the Louvre did in *Dessins et Manuscrits*. The National Gallery has promised the exhibition

will be beyond anything anyone has ever displayed regarding Leonardo, but their secrecy regarding the show has left this author feeling pessimistic. It is hard to say what will come from this promised monumental exhibition, as very little has been revealed in press releases made by the Gallery. Will they announce new information proving Leonardo was responsible for the majority of the second *Virgin of the Rocks*? Or provide new documentation resolving the debate over why a second painting was even produced? Many art historians and Leonardo enthusiasts will have to wait to discover if the questions regarding the *Virgin of the Rocks* will ever be answered concretely.
Works Cited


Delieuvin, Vincent, Curator at Louvre, e-mail response to author, September 8, 2010.


Morton, Christopher, Senior Information Manager at National Gallery, e-mail to author, July 14, 2010.

Muriel, Barbier, Assistant in Conservation at the Louvre, e-mail to author, July 15, 2010.


