

# **‘Cranach Inc.’ A Case Study Determining the Nature and Extent of Lucas Cranach the Elder’s Involvement in his Industrious Workshop using Image Processing**

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## **ABSTRACT**

Lucas Cranach the Elder (LCE) (1472-1553) maintained an organized and highly efficient workshop, served as councilor in Wittenberg from 1519-1544, established a publishing house in 1520, held a pharmacy from 1520, and served as mayor of Wittenberg from 1537 to 1543. He was known as the ‘swiftest of painters,’ resulting in 1,000 surviving panel paintings, canvas paintings, drawings, and etchings in a career that spanned 53 years (1500-1553). Facing this astoundingly enormous oeuvre, the question that this paper seeks to answer is unavoidable: what was LCE’s involvement in this oeuvre, which most is still attributed to him, in light of his many other time-consuming engagements? To answer this question, this paper becomes a study of stylistic comparisons of LCE’s oeuvre, in order to assess, analyze and identify his style to determine whether all of the works attributed to him were indeed his own handiwork. Classifying LCE’s style, together with the fact that he ran his workshop in factory-like conditions, supplying his apprentices with pigments, designs they could trace, copies, modelling versions, and patterns, making him an artist turned businessman, LCE becomes an artist who turned art into an industrial operation, earning the title ‘Cranach Inc.’ The conclusion of this paper will be based inter-alia on comparisons between Infra-red images and the visible paintings, in order to undermine the established attributions made to LCE.

**Keywords:** Lucas Cranach the Elder, Connoisseurship, Image Processing, Attribution, Art History

## 1. INTRODUCTION

In May of 2000, the two major auction houses, Christie's and Sotheby's, released their spring catalogues only to discover that both were selling the same painting, Paul Gauguin's *Vase de Fleurs (Lilas)*. The two paintings were sent to an expert who determined that the Christie's one was fake, while Sotheby's sold the genuine painting for £169,000.<sup>1</sup>

This example, one of all too many, demonstrates the overwhelming plethora of forgeries, fakes and mostly misattribution made throughout the art world. Considering the increasing financial and academic value of an already invaluable collection of masterpieces circulating the art world, it is a bit curious that, to date, a robust standardized protocol for authenticating paintings to at least minimize such occurrences has not been established. Recommendations on the technical requirements for valid written expert opinion for use by the international art community, whether for private purposes or in judicial proceedings remain mere suggestions conveyed to a limited group of researchers, and certainly do not constitute a groundbreaking consensus to be employed by those dealing with issues of authenticity or attribution.

Avoiding such detailed and binding attributional judgments usually confines catalogue entries or museum labels to a simple 'Lucas Cranach the Elder' (as is the case in point), even though most of the works currently attributed to LCE might very well not be of his own making, which I will try to demonstrate in this paper. In the absence of a protocol on which there is overwhelming consensus in an effort to arrive at accurate attribution of paintings, I set out to devise a three-pronged examination, through which artwork are filtered to accomplish just that. This approach comprises art-historical documentation, stylistic connoisseurship, and

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<sup>1</sup> "Two versions of Gauguin work on sale at same time," The Telegraph, accessed March, 16, 2014, <http://www.telegraph.co.uk/news/worldnews/northamerica/usa/1456587/Two-versions-of-Gauguin-work-on-sale-at-same-time.html>.

technical examination, all of which complement each other in a more comprehensive scrutiny of artwork.

## **2. CRANACH INC.**

LCE maintained an organized and highly efficient workshop, served as councilor in Wittenberg from 1519-1544, established a publishing house in 1520, held a pharmacy from 1520, and served as mayor of Wittenberg from 1537 to 1543. He was known as the ‘swiftest of painters,’ resulting in 1,000 surviving panel paintings, canvas paintings, drawings and etchings in a career spanning 53 years (1500-1553), making him a remarkable case study. Facing this enormous oeuvre, the question of this paper is inevitable: what was LCE’s involvement in this oeuvre, most of which is still widely attributed to him, in light of the impressive quantity of works and his other numerous engagements? To answer this question, this paper will focus primarily on stylistic comparisons of LCE’s oeuvre, in order to assess, analyze and define his style for the ultimate and ambitious objective of determining authorship within LCE’s industrious workshop.

In order to identify and analyze LCE’s artistic style, his artistic biography will be separated into three periods: first, his trip to Vienna in 1500-1505, which brought about the explosive character of his vigorous early style of which 8 panel paintings survived; second, his call to Wittenberg by the Saxon Elector in 1505, where he stayed until 1512<sup>2</sup>, of which 44 panel paintings survived; and third, his move into the town of Wittenberg and opening of his private studio, first in Square Market, of which 132 panel paintings survived, and later, in 1518, on an expanded property which he ran until 1550 and of which 673 panel paintings survived<sup>3</sup>.

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<sup>2</sup> Jakob Rosenberg, “Lucas Cranach the Elder: A Critical Appreciation,” *Record of the Art Museum, Princeton University*, vol. 28, no. 1 (1969): 29.

<sup>3</sup> M. J. Friedländer and J. Rosenberg, *The Paintings of Lucas Cranach* (London: Philip Wilson Publishers Ltd., for Sotheby Parke Bernet, 1978): 17. LCE remained loyal to the Saxon court; first under the rule of Frederick the Wise who died in 1525, then under John the Steadfast who died in 1532, and John Frederick the Magnanimous with whom LCE is reported to have been very close, but who also monopolized LCE’s studio to create large Protestant altarpieces.

The surviving panel paintings, amounting at an astonishing 857 panels, have been systematically mapped according to the aforementioned periods, and reviewed using art historical research, connoisseurship<sup>4</sup>, and technical examinations in order to define LCE's artistic style. A representative sample from each period will be shown to entertain the hypothesis that LCE, one of the richest men in Wittenberg, was interested in one thing – maintaining that status. This will be supported by the conjecture of this paper that from 1518 onwards, LCE ran his workshop in factory-like conditions, supplying his apprentices with pigments, designs they could trace, copies, modelling versions, and patterns, making him an artist turned businessman, worthy of the title 'Cranach Inc.'

### 3. INFLUENCES ON THE WAY TO WITTENBERG

LCE's early style is said to be based on three factors: the influence of his father Hans and the current artistic style in Kronach, Dürer's Apocalypse woodcuts, and, finally, the stimulus of

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<sup>4</sup> The practice of connoisseurship is the identification of authorship by examining a work's style. Although this 20<sup>th</sup> century definition encapsulates the essence of what connoisseurship *is*, it cannot be fully understood without addressing its evolution and its contribution to the development of art historical research. The practice of connoisseurship can be traced back to the 16<sup>th</sup> century with Giorgio Vasari (1511-1574), who established the first model for attribution, and Giulio Mancini's (1558-1630) instruction manual for the amateur on connoisseurship. In the 17<sup>th</sup> century, efforts have been made in France to transform connoisseurship into a rational science, raising its intellectual respectability, whereas England in the 18<sup>th</sup> century saw the development of connoisseurship into a logical practice with the works of Jonathan Richardson Sr. The 19<sup>th</sup> century saw a newfound preoccupation with historical methodology in Luigi Lanzi's *Storia pittorica della Italia*, which contrasted with his contemporary Karl Friedrich von Rumohr's focus on original analyses of documented information as well as artistic observation. Rumohr's method was further developed by Giovanni Morelli, who based his attributions on stylistic analyses alone. Bernard Berenson, who was a great admirer of Morelli, used his methods early on in his career. However, unlike Morelli, who barely explained or even used his own methods, Berenson justified his observations and made extensive use of his methods. Nevertheless, both Morelli's and Berenson's methods are predicated on the connoisseur's intuition for attribution, giving rise to the 20<sup>th</sup> century connoisseur Max Friedländer and his assertion that connoisseurs ultimately reach attributions based on intuition. These theories have been utilized to analyze LCE's paintings, together with art historical research and image processing.

the works which were being produced in the region between Regensburg and Vienna around 1500.<sup>5</sup> Since the 'Kronach style' is unknown, and no works remain from his father's workshop, the first factor remains speculative at best.<sup>6</sup> Searching the region between Regensburg and Vienna for possible influences on LCE's early style, names such as Konrad Witz (1400-1445), Michael Pacher (1435-1498) and Marx Reichlich (1460-1520) stand out, but none had specific links to LCE, nor is there any visible comparison to be made between them.

A possible influence can be detected in Jan Pollack's *Altarpiece of St. Peter* (figs.1-2), where we find the two thieves who lift in violently pressing movement against the cords with which they are tied to the crosses, indicating that this altarpiece, at least, had the unrestrained passion which may have affected young LCE in his drawings of the two thieves (figs. 3-4).<sup>7</sup> But Pollack's possible influence is reduced when comparing LCE's early style with Dürer's Apocalypse woodcuts.

A portion of them (figs. 5-7), show strong contrasts of black and white, loose drawing and rich contours, all of which appear in LCE's clearly formulated craftsmanship which carried over into his paintings, but LCE is much wilder in his depictions. A specific example can be seen in figs. 8-9, showing a woodcut comparison of the *Agony in the Garden*, where LCE surpasses his great Nuremberg contemporary in the expressionistic sweep of his draughtsmanship. This is most evident in the kneeling figure of Christ, in the vigorous plastic accent added by the tree in the foreground, and in the more dramatic contrast of lights and darks<sup>8</sup>.

This masterful expressionism continued throughout his work in Vienna, with coloristic brilliance and exuberance. These expressive characteristics are particularly apparent in

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<sup>5</sup> W. L. M. Burke, "Lucas Cranach the Elder," *The Art Bulletin*, vol. 18, no. 1 (1936): 27.

<sup>6</sup> Ibid., 28. Burke suggests that the Nuremberg style might have influenced LCE, through the works of Hans Pleydenwurff (1420-1472) and Graf Löwenstein amongst others, but no degree of certainty can be made as to their effect, if any, on LCE.

<sup>7</sup> C. Glazer, *Lukas Cranach* (Leipzig: Im Insel- Verlag, 1923): 18.

<sup>8</sup> J. Rosenberg, "Lucas Cranach the Elder: A Critical Appreciation," *Record of the Art Museum, Princeton University*, vol. 28, no. 1 (1969): 33.

comparison to his later paintings in Wittenberg, famous as the birthplace of the Reformation, which reveal fundamental changes in his style.

Although LCE's paintings, as seen in visible light, show a consistent style in his Vienna years, and although his arrival at Wittenberg was accompanied by numerous changes in his style (acceptable by all means), his underdrawings indicate the beginning of the evolutionary process of the painting. From a connoisseurial point of view, these indicate the spontaneous, individual, unconventional, rhythmic and non-imitable style of LCE. Therefore, these underdrawings may be seen as the purer forms of LCE's artistic process. The underdrawings between 1500-1505 remain stylistically synchronized with the painting itself, whereas the changed visible style after 1505 differs from the underdrawings, as some of the underdrawings still maintain his personal style, indicating that he was still at the very least the creator of the underdrawings. From 1518 onwards we see a distinct transformation in the underdrawings.

#### **4. CRANACH'S STYLE FROM 1500-1505**

The utterly unrestrained passion displayed in the eight surviving panel paintings from LCE's Vienna years, shows the expressive characteristics of these paintings, compared here to their IRR images respectively.

All eight of the panel paintings<sup>9</sup> (of which 2 are shown here, figs. 10-13) are carried out in a fluid medium with a brush or possibly feather, and are characterized by a free and sketchy air, freehand underdrawing, thin lines combined with broader lines, and occasional hatching-strokes and washes. As no preparatory sketches survive from this period, it can be assumed according to the IRR images that the underdrawings themselves serve as the preparatory sketches. The detailed images (figs. 14-15) show abrupt, expressive lines, not ordered or completely thought through, reinforcing the hypothesis that these *are* the preliminary sketches.

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<sup>9</sup> 'The Cranach Digital Archive' (cda), accessed September, 4, 2014, [http://www.lucascranach.org/object.php?&obj=AT\\_KHM\\_GG6905\\_FR001&uid=3&page=1&fol=01\\_Overall&img=AT\\_KHM\\_GG6905\\_FR001\\_2008-08\\_Overall.tif](http://www.lucascranach.org/object.php?&obj=AT_KHM_GG6905_FR001&uid=3&page=1&fol=01_Overall&img=AT_KHM_GG6905_FR001_2008-08_Overall.tif)

The contours and volume in all the underdrawings from this period are indicated with relatively short, curvy lines. Shapes are clarified by repeated lines, which do not necessarily determine boundaries for paint application.<sup>10</sup> These lines are characteristic when addressing specific parts of the image, such as the characteristic fluidity of fabrics, the execution of the figures, which stylistically correspond with one another, the fingers and toes, showing the same physiological traits for males and females, and so is the hair, the torso and knees, as well as the hands and toes. These panel paintings show underdrawings of an almost calligraphic nature, reflecting LCE's extraordinarily dynamic working method (figs. 16-18).

## 5. 1505-1512: COLLABORATIONS AND STYLISTIC CHANGE

LCE's period in the Wittenberg castle reveals numerous changes in his style. Based on the 44 surviving panels, mostly of religious subjects, this period marks a distinct change in dramatic tone which infused his earlier works: a combination of flat realism lacking emotional tone, with the elongated, slim figures which characterize much of his Wittenberg style, together with an isolation of the figures from the background, much in the manner of a collage. This is evident in the first painting after his arrival at the court with the *Altarpiece with the Martyrdom of St. Catharine* (fig. 19) and in such paintings as the ones presented.

LCE's changed style denotes his ability to adapt to his patrons' desires and inclinations. 'Accuracy in depiction, speed of execution, clarity, entertaining variety- such were the virtues most highly esteemed, and LCE, obedient and reliable servant that he was, was at pains to emphasize those qualities that brought him the greatest reward,'<sup>11</sup>- fame and fortune. The question to be asked at this point is – did LCE's intuitive, spontaneous, and calligraphic style depicted in the paintings and the IRR images of his Vienna years change in the underdrawings as well as the final products as of 1505?

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<sup>10</sup> I. Sandner and G. Heydenreich, "Cranach als Zeichner auf dem Malgrund–Auswertung der Untersuchungen im infraroten Strahlenbereich," *Cranach Digital Archive* (2013): 7-8.

<sup>11</sup> Friedländer and Rosenberg, *The Paintings of Lucas Cranach*, 18.

The answer is ‘yes and no’: of the 44 panel paintings, 20 appear to display a striking resemblance in the style of underdrawings that LCE exhibits in his Vienna paintings. Since it is very unlikely that LCE developed an entirely different style for some paintings while maintaining his style for others, it can be inferred with a great degree of certainty that at that period LCE was not responsible for all of the 44 paintings attributed to him. 13 of these appear to have been done by his apprentices, and 11 are collaborations. Those that may still be attributed to LCE display the style from his early years in the IRR images, such as in *The Fourteen Helpers in Need* (fig. 20) and their detailed images (figs. 21-23). Those that may be attributed to his apprentices can be identified by the distinct tracing lines, showing a simplification of outlines, limited to essential forms as seen in figs. 24-28. It seems that this period shows the underdrawings as more definitive than in his Vienna years, since slight corrections, if any, are discernable. Moreover, the use of religious subjects, fused with similar compositions, seems more economical as patterns could have been used.

The use of tracing designs supports the hypothesis that LCE’s expressive style, so beautifully illustrated and highly individual could not be copied. Therefore, his task was not only to produce patterns for tracing, but to simplify and standardize them as well.<sup>12</sup> This hypothesis gains validity when analyzing his workshop paintings from 1512 onwards.

## **6. 1512-1518: FIZZLING OUT**

As of 1512, the year LCE moved into his own estate and established his first private workshop, we begin to see a standardized production method. Yet, between 1512 and 1518, there are still a few paintings in which we see LCE’s distinctive style, pointing to his ongoing yet diminishing involvement in the production alongside his apprentices.

7 paintings from this period seem to be entirely of his making, and the remaining 125 panel paintings from this period appear to have been made solely by his apprentices, showing traced lines and no *pentimenti*. As of 1518, the output out of the workshop was predominantly portraits, which also marks LCE’s disappearance and an efficient use of prototypical designs.

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<sup>12</sup> G. Heydenreich, *Lucas Cranach the Elder: Painting Materials, Techniques and Workshop Practice* (Amsterdam: Amsterdam University Press, 2007): 108.



## 7. 1518-1550: GONE MISSING

LCE's service as Councilor in Wittenberg, establishment of a publishing house, reopening a pharmacy, coupled with the distribution of work in the mansion-like Cranach workshop on the expanded property all lead to one cardinal question – who was responsible for the creation of 673 panel paintings (that we know of) between 1518-1550?

Out of this vast amount of paintings, I have found no stylistic resemblance between LCE's individual artistic style and the underdrawings examined.

The remaining 673 panel paintings seem to be workshop productions, mostly of portraits, even though they are still largely attributed to LCE. These show traced lines in the IRR images, no *pentimenti* whatsoever and a highly ordered execution, which allude to pre-existing design patterns and the use of a modular system. This system strengthens the point of efficiency over artistic ideals, and shows, together with the IRR comparisons that LCE was not involved in the production of the paintings from 1518, but rather his apprentices worked according to his (probably) patterned designs. The use of standard design patterns can already be seen in visible light images, which show a prototypical use of portrait design (figs. 29-32). LCE's place in the workshop is further questioned by the ordering of standard-sized panels in advance, thus increasing the workshop's efficiency.

By using a modular system, standard design formats could be used by 'tracing' the design onto a standard size panel. By doing so, LCE could modify the designs to scale.<sup>13</sup> This system emphasizes that efficiency, not to mention profitability, trumped artistic ideals. Since LCE used a modular system for his designs, it may be presumed that he did the same when it came to painting on the underdrawings, working on each section separately. But since the palette itself could hold a limited amount of paint, coupled with the fact that LCE used between two to three pigments on a single section, it is not entirely unreasonable that different sections of

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<sup>13</sup> Ibid, 44, 332, note 26.

the same painting were painted by different artists, each using his own palette on the section he was responsible for<sup>14</sup>; thus transforming LCE's workshop into a production line.

## 8. CONCLUSION

19<sup>th</sup> and 20<sup>th</sup> century research on LCE seems to maintain that stylistic research involving his workshop is insoluble. Addressing the responsibilities of apprentices and the division of labor in the workshop, coupled with reluctance to make concrete attributional judgments and with the focus on painting techniques, perpetuated the longstanding problem of attribution. Most of the works coming out of LCE's workshop from 1518 onwards are still attributed to him, negating past catalogue entries which attributed some of these paintings to anonymous masters in his workshop, his sons, Matthias Grünewald and many others. It seems therefore that the research concerning attributional properties with regards to LCE remains in a constant state of disagreement.

The move to his private studio, the use of modular designs, standardized panels, ready-made pigments, using his pharmacy to buy large quantities of pigments at low cost, as several painting materials were considered pharmaceutical items in the 16<sup>th</sup> century, and a task force of at least 30 at any given time, show LCE's workshop to be that of a production line, rather than an artistic greenhouse for originality and ingenuity, raising the imperative need to re-examine, re-label and re-discover one of the greatest German painters of the Renaissance.

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<sup>14</sup> J. Kirby, "The Painter's Trade in the Seventeenth Century: Theory and Practice," *National Gallery Technical Bulletin*, vol. 20 (1999): 15.

## FIGURES



Fig. 1: Jan Polack, *Altarpiece of St. Peter*, 1492, oil on wood, 235 x 279 cm, Bayerisches National Museum, Munich



Fig. 2: Jan Polack, *Altarpiece of St. Peter* (detail), 1492, oil on wood, 235 x 279 cm, Bayerisches National Museum, Munich



<Fig. 3: Lucas Cranach the Elder, *The Good Thief on the Cross*, 1502, Charcoal with white highlights on red-toned paper, 22.6 x 12.1 cm, Staatliche Museen, Berlin



>Fig. 4: Lucas Cranach the Elder, *Thief on the Cross, facing Left*, 1502, Charcoal with white highlights on red-toned paper, 21.5 x 12.8 cm, Staatliche Museen, Berlin



^<Fig. 5: Albrecht Dürer, *Crucifixion*, c. 1489, Woodcut, 393 x 282 mm, Germanisches Nationalmuseum, Nuremberg

^>Fig. 6: Albrecht Dürer, *Lamentation for the Dead Christ*, 1495-98, Woodcut, 395 x 292 mm, British Museum, London

<Fig. 7: Albrecht Dürer, *Martyrdom of the Ten Thousand*, c. 1496, Woodcut, 39 x 28 cm, Graphische Sammlung Albertina, Vienna





<Fig. 8: Lucas Cranach the Elder, *The Agony in the Garden*, 1502, Woodcut, 39 x 28.2 cm, The Metropolitan Museum of Art, New York



>Fig. 9: Albrecht Dürer *The Agony in the Garden*, n.d., Woodcut, The Metropolitan Museum of Art, New York



<Fig. 10: Lucas Cranach the Elder, *The Crucifixion of Christ*, about 1500, Oil on Wood, 58.5 cm x 45 cm, Kunsthistorisches Museum, Vienna



>Fig. 11: Lucas Cranach the Elder, IRR of *The Crucifixion of Christ*, about 1500, fluid black pigmented medium, brush, 58.5 cm x 45 cm, Kunsthistorisches Museum, Vienna



<Fig. 12: Lucas Cranach the Elder, *The Penitent St. Jerome*, 1502, oil on wood, 55.5 x 41.5 cm, Kunsthistorisches Museum, Vienna



>Fig. 13: Lucas Cranach the Elder, IRR of *The Penitent St. Jerome*, 1502, fluid black pigmented medium, brush, 55.5 x 41.5 cm, Kunsthistorisches Museum, Vienna



Figs. 14-15: Lucas Cranach the Elder, detail IRR of *The Crucifixion of Christ*, about 1500, fluid black pigmented medium, brush, 58.5 cm x 45 cm, Kunsthistorisches Museum, Vienna





<Fig. 16: Lucas Cranach the Elder, detail of IRR of *The Lamentation of Christ*, 1503, fluid black pigmented medium, brush, 138 x 98.3 cm, Alte Pinakothek, Munich

<>Fig. 17: Lucas Cranach the Elder, detail IRR of *The Crucifixion of Christ*, about 1500, fluid black pigmented medium, brush, 58.5 cm x 45 cm, Kunsthistorisches Museum, Vienna

>Fig. 18: Lucas Cranach the Elder, detail of IRR of *The Holy Family Resting on its Flight to Egypt*, 1504, fluid black pigmented medium, brush, 70.9 x 53 cm, Staatliche Museen zu Berlin, Gemäldegalerie



Fig. 19: Lucas Cranach the Elder, *Altarpiece with the Martyrdom of St. Catharine*- detail of central panel, 1506, oil on wood, 127 x 269.9 cm, Staatliche Kunstsammlungen Dresden



Fig. 20: Lucas Cranach the Elder, *The Fourteen Helpers in Need*, c. 1505-1508, oil on panel, 84.3 x 117.8 cm, Ev. Kirchgemeinde St. Marien, Torgau



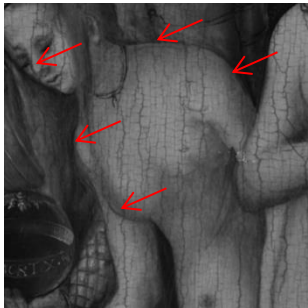
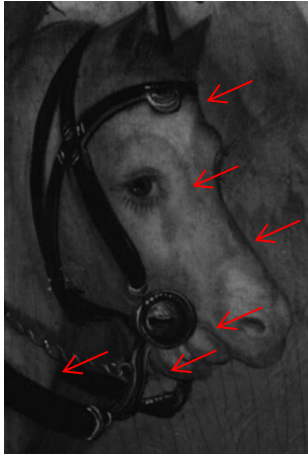
Figs. 21-23: Lucas Cranach the Elder, IRR of *The Fourteen Helpers in Need*, c. 1505-1508, fluid black pigmented medium, brush, 84.3 x 117.8 cm, Ev. Kirchgemeinde St. Marien, Torgau



<Fig. 24: Lucas Cranach the Elder, *The Judgement of Paris*, 1512, oil on panel, 43 x 32.2 cm, Kimbell Art Museum, Fort Worth



>Fig. 25: Lucas Cranach the Elder, IRR of *The Judgement of Paris*, 1512, fluid black pigmented medium, brush, 43 x 32.2 cm, Kimbell Art Museum, Fort Worth



Figs.26-28: Lucas Cranach the Elder, IRR of *The Judgement of Paris* – red arrows show tracing lines, 1512, fluid black pigmented medium, brush, 43 x 32.2 cm, Kimbell Art Museum, Fort Worth



<Figs. 29-30: Lucas Cranach the Elder, *Portrait of Leon Braunsberg and IRR*, 1521, oil on panel, 63 x 40 cm, Musées royaux des Beaux-Arts de Belgique, Brussels

>Figs. 31-32: Lucas Cranach the Elder?, *Portrait of Luther as Junker Jörg and IRR*, 1521, oil on panel, 33.5 x 25.3 cm, Museum der bildenden Künste, Leipzig

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