# Painting Pairs: Art History and Technical Study 2019-2020

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Unknown Artist, 16<sup>th</sup> century Spanish Panel *Saint Blaise* Private owner



'Blaise (Blasius) is like *blandus*, bland, or is formed from *bela*, meaning habit or disposition, and *syor*, small; for the saint was bland through the sweetness of his discourse, virtuous by habit, and small by the humility of his way of life.'

Jacobus de Voragine, The Golden Legend

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#### Introduction to the Project and Acknowledgments

This is the final report of a collaborative research project that we conducted as part of *Painting Pairs: Art History and Technical Study* at the Courtauld Institute of Art. The initiative is supported by the Department of Conservation and Technology, The Courtauld Gallery and the Research Forum.

As part of this project, we were introduced to a sixteenth-century Spanish panel painting of Saint Blaise that is part of a private collection. Using a combination of art historical and technical examination, we sought to better understand the painting and its story while restoring fragile parts of the work to their original condition. Though sadly our investigation was interrupted abruptly by the COVID-19 pandemic, we were still able to summarise our findings, working hypotheses and concerns in the following report. They propose how the panel might have been made, what it was used for, and how it travelled. We also hope to show its potential relevance to existing and future scholarship on medieval to early modern Spanish panel paintings.

This research project would not have been possible without the help and guidance of a number of people. Thank you to Pia Gottschaller, Aviva Burnstock, and Pippa Balch, whose support and critical eye strengthened the following analysis. We would like to thank the owner of *Saint Blaise* for his trust, time and bold ideas, and all those whose helpful questions during our presentation at the Research Forum challenged and expanded our thinking. We would also like to offer special thanks to the archives and institutions instrumental in this research: the Courtauld, the Warburg Institute and the Wellcome Collection for their archival materials and efforts to make those available to us online as we suddenly found ourselves confined to our homes and computers. Working on Saint Blaise, known for being a healer of illnesses, brought a symbolic sense of pertinence to our project during this difficult period. We hope this report offers the opportunity for bright, new ideas to emerge for art historians and conservators alike.

#### Introduction to the Painting



Unknown Artist, Saint Blaise, c. 16th CenturyFigure 1. Front with frameFigure 2. Back with frame

This work was painted in oil on a wooden panel that measures 62 by 48 cm. It depicts the Catholic saint and martyr known as *Saint Blaise*. Saint Blaise is celebrated for his miraculous treatment of people and wild animals as a physician and bishop in the region of Sebastea in modern-day Armenia. In this jewel-like panel, he is dressed in elaborate red and green vestments and can be seen gesturing up to the sky with his right hand, his crozier fixed in his right elbow, while holding a large wooden and metal instrument—an iron comb made from wood and metal—in his other hand. He is seated on a subtly decorated wooden bench; his head tilted slightly to accommodate a soft, tranquil gaze. The delicate and skilfully painted facial features show wrinkled cheeks, a pouty lip and glistening blue-green eyes that are replicated in the stones on the bishop's mitre. The figure of the saint is placed in front of a gilded background, parts of which were decorated with punchwork. The punchwork's uneven spacing makes it look rather lopsided and it is of a rougher quality than the intricately painted facial features. When we first saw the painting, we were immediately intrigued by these subtle contradictions.

The Spanish auction house Balclis, based in Barcelona, identified the work as a Catalan School 16<sup>th</sup> century painting in 2017, prior to its sale to the current owner.<sup>1</sup> It is unclear exactly how the auction house made this attribution, presumably on stylistic grounds, and no historical or technical analysis has been published. Therefore, our initial research questions where: where was this painting made, for what purpose, and what might be said about the journey it has undertaken since then? How did these aspects affect its current appearance? Over the past few months, we have worked to improve the physical appearance and historical knowledge of the painting through a combination of conservation treatment and historical research. As a result, we are able to state that in our view the above attribution and date are correct, and that the painting was probably originally part of a larger altarpiece.



Figure 3. Detail of the label on the back

The only initial clue for the provenance of the painting is a 20<sup>th</sup> century paper label from a Spanish conservator on the back of the panel (fig. 3). The label, translated from Spanish into English, reads: 'Restorer of the Royal Monastery of Poblet,' who seems to specialise in the treatment of paintings on 'linen, copper and retables.'<sup>2</sup> Previous conservation work on the panel

may have been done by this restorer though more information about this label would need to be gathered to ascertain the extent of work that was done by them.<sup>3</sup> The monastery of Poplet, since 1991 a UNESCO World Heritage site, was founded in 1151 by Cistercian monks from France. It is located in the province of Catalonia at

<sup>&</sup>lt;sup>1</sup> We were unable to contact the auction house due to the on-going COVID-19 pandemic. Previous attempts to contact the auction house for more information on the work by the owner of the panel did not result in more useful information.

 <sup>&</sup>lt;sup>2</sup> Translation by the authors. Original Spanish label: 'Restaurador del Real Monasterio de Poblet; Lienzoz Cobres Retablos; Torrente de las flores, 72, 1.°, 3. ° = Tel. 279317 = Barcelona'.
 <sup>3</sup> Through the treatment of this panel, extensive retouching and overpaint was found as well as a

locally applied varnish that only covered the painted sections of the painting. Conservation treatment is still underway.

the foot of the Prades mountains and is mostly associated with Saint Benedict and Saint Bernard.<sup>4</sup> The monastery was abandoned in 1835 and subject to numerous plunderings in the nineteenth century until Italian monks returned in 1940, when a substantial restoration project began to return the place to its original state. Our painting may have been acquired possibly as part of an altarpiece by the monastery at this time. There is no discernible date on the conservation label, nor any indication of the identity of the restorer.<sup>5</sup> Was the conservator exclusively associated with the monastery or did they also work for public institutions and private collectors? Can we date the conservator's work to before or after the monastery's renewal in 1940? Understanding the painting's relationship to the monestary, if there is one at all, will remain an important question for further research into the panel that we were not able to study in depth.

<sup>&</sup>lt;sup>4</sup> For the official website of Monasterio de Santa María de Poblet, see: http://www.poblet.cat/ (accessed on 20/04/2020).

<sup>&</sup>lt;sup>5</sup> There are a number of archives associated with the monastery that we were unable to access which may be a useful avenue for further research: for example the library of the monastery, the Montserrat Tarradellas I Macia Archive and the Casa Ducal de Medinacelli Archive.

# **Subject History: Saint Blaise and Altarpieces**

Our research was initially concerned with the curious, blocked appearance of the iron comb that appeared distinct from most other depictions of Saint Blaise. However, the typical spikey ends had only been obscured by a layer of dirt and wax-like residue that has been removed during the ongoing conservation treatment. The iron comb that became visible during technical examination can be clearly attributed to Saint Blaise. This comb, paired with the halo and general religious iconography of the work, would have allowed a sixteenth-century audience to read the painting as a devotional image of Saint Blaise.

Saint Blaise was one of the most popular medieval saints, known for his miraculous healing treatments as a physician and a bishop. He became a martyr through his death by iron combs and is often depicted in his bishop's mitre holding a crozier (figs. 4 to 7). Other typical attributes are burning candles or depictions of scenes of his life (for example, him tending to animals outside a cave-like structure, fig. 4). Known as *San Blas* in Spain, *San Biagio* in Italy, and *São Brás* in Portugal and across the Lusophone Atlantic, the saint was particularly popular in Southern Europe, and the Spanish-ruled regions beyond.



**Figure 4.** Saint Blaise found by hunters in his cave, Spanish  $15^{th}$  century, oil on panel, 54 x 58 cm.



**Figure 5.** *Saint Blaise,* Illuminated choir book, Venice, c. 1440-50



**Figure 6.** Saint Blaise, Martin Beruat, c.1469-1497, oil, gold and stucco on panel, 136.5 x 97 cm.



**Figure 7.** *Saint Blaise,* Hans Memling, oil on panel c. 1491

*The Golden Legend*, one of the most widely read books of the medieval period and cited from at the beginning of this report, was compiled in 1260 by Jacobus de Voragine and includes a passage on Saint Blaise that influenced many medieval representations.<sup>6</sup> In this text, Saint Blaise is portrayed as a gentle healer who, aside from his miraculous actions, was ennobled by his loyalty to Christ and rejection of non-Christian gods. For this, he is murdered by molten lead and iron combs. Prior to his death, Blaise 'prayed to the Lord that anyone who besought his intercession when suffering from throat trouble or any other illness should be heard and healed immediately.'<sup>7</sup> In fact, the saint's relationship to illnesses of the throat goes back to the medical texts of Aëtius of Amida, a Byzantine Greek physician.<sup>8</sup> The attribute of an iron comb—an instrument that bears a distinctive visual resemblance to wool carding combs—signals that he is also the patron saint of wool combers.<sup>9</sup>

<sup>&</sup>lt;sup>6</sup> Jacobus de Voragine, *The Golden Legend: Readings on the Saints,* translated by William Granger Ryan (Princeton and Oxford: Princeton University Press, 1993), 151-154.

<sup>&</sup>lt;sup>7</sup> Voragine, *The Golden Legend*, 153.

<sup>&</sup>lt;sup>8</sup> Another notable source are the medieval *Acts of Saint Blaise*. The Wellcome Collection has devoted special attention to Saint Blaise as a healer. See for example: Julia Nurse, 'St Blaise the Throat Healer,' in *From The Collections*, URL: http://blog.wellcomelibrary.org/2016/04/st-blaise-the-throat-blesser/ (accessed 15 May 2020).

<sup>&</sup>lt;sup>9</sup> Britannica Academic, 'St Blaise', 10 February 2018 (accessed 15 May, 2020).

Representations of Saint Blaise in Spain, both in scenes from his life and as a saintly figure, remained popular throughout the medieval period and into the sixteenth century. Depictions of Saint Blaise with an iron comb can be found in multiple altarpieces in Spain, including one executed by the Master of the Paheria in the parochial church of Algayon and the St Laurence altar in the church of Nuestra Senora de los Milagros in Agreda.<sup>10</sup> Other Spanish images of Saint Blaise, for example by Martín Bernat and Juan de Juanes, also show similar punchwork, colouring, and attributes.<sup>11</sup>

In fact, we think that our panel was probably not meant for individual display, but was part of an altarpiece that typically included a number of saints. Such an earlier context is suggested by what might be remnants of crossbars and joints in the panel. More importantly, the face of the saint also shows a remarkable similarity to a number of other pictures sold by Balclis, the same Spanish auction house where Saint Blaise was acquired. These other figures are Saint Augustine, Saint Catherine of Alexandria, and Saint Anthony the Abbot (figs. 8 - 10). The panel of Saint Augustine has similar dimensions to that of Saint Blaise at 63.5 by 50 cm, while the supports of Saint Catherine and Saint Anthony are both 86.5 by 49.5 cm in size. Moreover, we know that Saint Augustine was sold in the same sale as Saint Blaise (although to a different owner), while Saint Catherine and Saint Anthony were auctioned off at a different time. The four paintings are stylistically very similar in composition, painting style and punchwork. Note, for example, the decorated wooden benches in Saint Blaise and Saint Augustine—a motif repeated in the saints' attributes-the comparable colour schemes, the painting style of details like the draperies, revealing a characteristic block-like application in the folds, and of the facial features.<sup>12</sup> The punchwork on all four paintings was created with distinctive three tool marks in the same patterned shapes (figs. 11 to 14).

In other words, *Saint Blaise* was perhaps part of a much larger altarpiece that also included Saint Augustine, Catherine and Anthony, perhaps as side panels, less likely as predella panels. As has happened to other altarpieces, sometimes the

<sup>&</sup>lt;sup>10</sup> This is based on research cited in Elizabeth Lewis' thesis by Hans Aurenhammer; no dates were given. Elizabeth Lewis, 'The Iconography of St Blaise,' PhD Dissertation submitted to the Graduate School of Georgetown University, 1976: 152-153. See also M. M. Banks, 'St. Blaise's Comb', *Folklore* 45, no. 1 (1934): 77-78.

<sup>&</sup>lt;sup>11</sup> Authors' research. See accompanying images for examples.

<sup>&</sup>lt;sup>12</sup> For the latter, see, for example the V-like shape in the cheeks and the wrinkles around the mouth, indicating the hand of a particular artist.

individual panels were separated, for a variety of reasons: during a shift from public to private devotion; for financial reasons; as anti-Catholic acts during the Reformation; or during monastery raids in the secularisation.



**Figure 8.** Saint Anthony the Abbot, Catalan School, 16<sup>th</sup> Century, Oil and gold leaf on panel, 86.5 x 49.5 cm.



**Figure 9.** Saint Catherine of Alexandria, Catalan School, 16<sup>th</sup> Century, Oil and gold leaf on panel, 86.5 x 49.5 cm.



**Figure 10.** *Saint Augustine*, Catalan School, 16<sup>th</sup> Century, Oil and gold leaf on panel



Figure 11. Detail of punchwork in *Saint Blaise* 



Figure 13. Detail of punchwork in Saint Catherine of Alexandria



**Figure 12.** Detail of punchwork in *Saint Augustine* 



Figure 14. Detail of punchwork in Saint Anthony the Abbot

# Materials and Technique: Panel Construction and Ground Preparation

Technical examination indicates that the construction and preparation of this panel are consistent with what is known about Spanish panel preparation in the sixteenth century. This hypothesis is supported by an x-radiograph taken of the panel (fig. 15) and visual observations made under magnification.

Spanish techniques for wooden panels were unique in Western Europe, as painting conservator Zahira Véliz expertly laid out in her essay.<sup>13</sup> Their varied practices were informed by the cultural diversity of the country, including Islamic culture, Italian traditions and the Northern Gothic techniques, as well as by the materials native to the hot and dry region.<sup>14</sup> By the sixteenth century, panels were often constructed in one or multiple workshops, and 'separate contracts for painting and carpentry [and sub-contracting carpentry] were also frequent.<sup>15</sup> Such contracts ensured quality control both to the painter and the client. In fact, multiple complex contracts with detailed agreements concerning everything from the type of wood to the subject matter were common.<sup>16</sup> Because subcontracting was so frequent, panels like *Saint Blaise* could travel through various hands before arriving at their intended space of display.

The wooden material sourced for the panel can offer a good indication of its place of origin. Materials that were available locally were preferred: thuja, a type of cedar, was popular in the south of Spain, pine was used in Castile and Aragon, poplar in Catalonia, and, although less frequently, walnut and Spanish oak were sourced for Castilian paintings.<sup>17</sup> However, due to the political relationship between Spain and the Low Countries, a connection exploited by various artists and

 <sup>&</sup>lt;sup>13</sup> Zahira Véliz, 'Wooden Panels and Their Preparation for Painting from the Middle Ages to the Seventeenth Century in Spain,' in *History of Panel Making Techniques*, part two, 136-149.
 <sup>14</sup> Ibid., 136. See also: Michele Bacci, 'Devotional Panels as Sites of Intercultural Exchange,' *Domestic Devotions in Early Modern Italy*, edited by Maya Corri, Marco Faini, and Alessia Meneghin (Leiden: Brill, 2019), 272-292; Ainhoa Rodríguez-López, Narayan Khandekar, Glenn Gates and Richard Newman, 'Materials and Techniques of a Spanish Renaissance Panel Painting,' *Studies in Conservation* 52, no. 2 (2007): 81-100; Zahira Véliz, *Artists' Techniques in Golden Age Spain* (Cambridge: Cambridge University Press, 1987).

<sup>&</sup>lt;sup>15</sup> Véliz, 'Wooden Panels and Their Preparation for Painting from the Middle Ages to the Seventeenth Century in Spain,' 137.

<sup>&</sup>lt;sup>16</sup> Ibid, p.137.

<sup>&</sup>lt;sup>17</sup> Ibid., 137-9; Judith Sobré, *Behind the Altar Table: The Development of the Painted Retable in Spain, 1350-1500* (Columbia: University of Missouri Press, 1989); Susie Nash, *Late Medieval Panel Paintings: Materials, Methods, Meanings* (London: Sam Fogg, 2011).

merchants, imported panels were also used for Spanish paintings from the midsixteenth century onwards.<sup>18</sup> Art historian Susie Nash has referred to Spain as 'a melting pot, attracting high-quality artists from across Europe, its trade routes, ruling families and geography connecting it closely to both the Netherlands and Italy.'<sup>19</sup> Netherlandish panels were often made of Baltic oak, which was imported to Spain in certain cases, while France mostly used walnut and Germany spruce.<sup>20</sup> Unfortunately, dendrochronology on our panel has not been conducted, so the type of wood remains undetermined, but the above list indicates that the vast variety of types of wood in Spain used in that period would not have allowed us to make such



**Figure 15.** X-radiograph of *Saint Blaise*, Before Treatment

a regional attribution.

When a panel consisted of multiple boards, they were cut, sawn and then joined with butt joins, dowelled joins, butterfly lap joins or plain lap joins and often reinforced by crossbars fixed with nails hammered in from the front of the panel for added stability.<sup>21</sup> Single boards for smaller panels that had crossbars affixed to the back, in the same manner as in the case of larger panels, were usual for an altarpiece. The x-ray of Saint Blaise shows that the panel is made of a single board with no crossbars (fig. 15). The curved band on the

right hand side shows extensive woodworm channels that have been filled. There is no join visible differentiating this area to the rest of the panel which may indicate that the board was cut into the sap wood of the tree.<sup>22</sup>

<sup>21</sup> Véliz, 'Wooden Panels and Their Preparation for Painting from the Middle Ages to the Seventeenth Century in Spain,' 139. The different joins appear to be typical for Spain, though not exclusively.

<sup>&</sup>lt;sup>18</sup> For a comprehensive reading of this relationship, see, for example: Jonathan Brown, *Painting In Spain: 1500-1700* (New Haven: Yale University Press, 1998).

<sup>&</sup>lt;sup>19</sup> Nash, Late Medieval Panel Paintings, 7.

<sup>&</sup>lt;sup>20</sup> Susie Nash, Northern Renaissance Art (Oxford: Oxford University Press, 2009), 57-58.

<sup>&</sup>lt;sup>22</sup> Sap wood is the softest part of the tree and much more susceptible to woodworm damage.

Six small, circular white areas can be seen in the x-ray at the top and bottom of the panel. These areas of density are consistant with six slightly raised areas on the face of the painting, visible in normal light. These areas show the presence of six nails, of which the cut down tips of three can be viewed from the back. This suggests that crossbars were once attached to the back of the single board panel. The crossbars were secured by six nails that were hammered in from the front, proposing the hypothesis that the panel was made as part of a Spanish altarpiece. At some point, though, that altarpiece must have been disassembled—the crossbars were taken off and the nails were cut down. The image at that point became an individual panel, although it is likely that it remained in the same collection as the other images. The likelihood that the images somehow remained together, or were separated at a late stage in their history, stems from the fact that they were all sold around the same time by the same auction house in Barcelona, though to different owners.

A thick layer of canvas or vegetable fibres and gesso was sometimes added to Spanish panels: linen was popular for the front, hemp fibres for the back.<sup>23</sup> Véliz noted that while such organic reinforcements may be found across Europe, 'these materials are most abundant in the preparation of Spanish panels.'<sup>24</sup> This method is also mentioned in a number of contemporary sources, further confirming its widespread popularity in sixteenth-century Spain.<sup>25</sup> Indeed, the back of this panel does have a strip of of fibrous material down the centre, approximately 14cm wide and 30 cm long—though it is worth noting that this may be an addition by the Spanish conservator.<sup>26</sup> The x-ray shows dark and whispy lines, that do not relate to these fibres, but are visible over the entire panel (figs. 16 and 17). The x-ray cannot tell us at which level of the construction the fibres are present. In a loss of the gilding, fibres encased in glue in the ground layer can be seen, suggesting that this layer is on the front of the panel as part of the preparation layers (figs. 18 and 19).<sup>27</sup>

<sup>&</sup>lt;sup>23</sup> Véliz, 'Wooden Panels and Their Preparation for Painting from the Middle Ages to the Seventeenth Century in Spain,' 140.

<sup>&</sup>lt;sup>24</sup> Ibid.

<sup>&</sup>lt;sup>25</sup> See for example Francisco Pacheco, *El Arte de la Pintura,* edited by F.J. Sánchez Cantón (Madrid: Imprenta y Editorial Maestre, 1965 (1638).

<sup>&</sup>lt;sup>26</sup> Former Spanish conservators used similar methods of conservation as the original construction.

<sup>&</sup>lt;sup>27</sup> Technical examination still needs to be conducted on the fibres to determine what type of fibre was used.



**Figure 16.** Detail of X-radiograph from top left corner showing fibrous material



**Figure 18.** photomicrograph from an area of loss in the gilding showing fibres in the ground layer



**Figure 20.** Sample A, cross section taken from a loss in the browned copper green area underneath the proper left hand of Saint Blaise



**Figure 17.** Detail of X-radiograph from top right corner showing fibrous material



**Figure 19.** photomicrograph from an area of loss in the gilding showing fibres in the ground layer

For the ground, Spanish artists in the sixteenth century used chalk or gypsum, a white mixture made with calcium carbonate (usually called gesso) or calcium sulphate, respectively: the former appears to have been more popular in Castile, the latter in Valencia and Andalusia.<sup>28</sup> In paint cross-sections, a gypsum-containing ground can appear striated, whereas chalk particles are shaped like cocoliths.<sup>29</sup> The ground layer

<sup>&</sup>lt;sup>28</sup> Véliz, 'Wooden Panels and Their Preparation for Painting from the Middle Ages to the Seventeenth Century in Spain,' 142.

<sup>&</sup>lt;sup>29</sup> S. Santos Gómez, M. San Andrés Moya, J.L. Baldonedo Ródriguez, and O. Conje Sastre. 'Contribution to te study of grounds fro panel painting of te Spanish school in the fifteenth and sixteenth centuries', in *Painting Tecniques History, Materials and Studio Practice*, ed. Ashok Roy and Perry Smith (Contributions to the Dublin Congress 7-11 September 1998), pp. 115-120

of St Blaise appears to contain striated particles, yet further technical analysis needs to be done to confirm the components (fig. 20).<sup>30</sup>

Ultimately, the preparation of the structure and ground layers of Spanish panels has several distinctive attributes. The materials and techniques used for the painted surface of *Saint Blaise* offer a number of indications that the panel was made in the sixteenth century though it is impossible to definitively state that it was made in Spain. Our initial findings concerning the construction of the panel made for *Saint Blaise* would suggest that this panel was in fact made in Spain in the sixteenth century, though no specific region within the country can be identified.

<sup>&</sup>lt;sup>30</sup> EDX analysis needs to be done on the samples.

# Materials and Technique: Underdrawing and Paint Layers

The materials and techniques used for painting the image are also consistent with those used in sixteenth-century Spain. However, these methods were not exclusively used in Spain at this time but also in the Low Countries. Spanish underdrawings are in some ways different from the detailed and elaborate underdrawings that graced paintings in the Low Countries: Spanish painters appear to have preferred rough, bold lines to guide the formation of the image. In *Saint Blaise*, traces of an underdrawing can be observed in the nose and at the bottom of the bishop's robe in one area of shadow in the OSIRIS IR image (figs. 21 to 24).



Figure 21. OSIRIS infrared reflectogram



**Figure 22.** Infrared image taken with an adjusted IR camera: Canon D600

The fluid quality of the drawing suggests that a brush and carbon-containing ink were used. Incised lines, visible around the figure and within the garments that separate the painted area and the gilded area, were used in the preparation and planning of the composition. Although the IR images only show minimal underdrawing, this does not allow the conclusion that more of the drawing is not present. It could have been made with a non-IR absorbing material like red chalk or iron gall ink or might be covered by paint that blocks the IR radiation.



Figure 23. Detail taken from the OSIRIS image



Figure 24. Detail taken from the OSIRIS image

As already mentioned above, the panel seems to have been prepeared with a



**Figure 25.** Sample A taken from loss in the browned copper green area underneath the proper left hand



**Figure 26.** Sample E taken from a loss in an area of vermilion and red glazed robe

gypsum-based ground followed by a priming layer.<sup>31</sup> XRF analysis revealed peaks for calcium and lead throughout the painting suggesting that the thin priming layer is potentially comprised of lead white.<sup>32</sup> The cross-sections reveal that in some areas the priming is mixed with black particles.

The priming layers in the samples taken from the red sleeve and the green area (showing as almost black in the natural light image) underneath the left hand reveal a varied number of black particles. In the sample from the sleeve

 <sup>&</sup>lt;sup>31</sup> S. Santos Gómez, M. San Andrés Moya, J.L. Baldonedo Ródriguez, and O. Conje Sastre.
 'Contribution to te study of grounds fro panel painting of te Spanish school in the fifteenth and sixteenth centuries', in *Painting Tecniques History, Materials and Studio Practice*, ed. Ashok Roy and Perry Smith (Contributions to the Dublin Congress 7-11 September 1998), pp. 115-120
 <sup>32</sup> XRF: X-Ray fluorescence. The peaks for lead and sulphur overlap in the readings taken from XRF thus making it impossible to detect sulphur which would be present if the ground was made from calcium sulphate. Further testing with SEM-EDX needs to be done to further characterise these layers.

only one particle of black can be seen; whereas in the sample from the dark area, a significantly larger number of black particles is present. This suggests that different undertones were applied in the preparation stage. The OSIRIS IR image further supports this hypothesis: there is an observable difference in absorption in the two areas. The red robe is significantly lighter than the green areas (right inner sleeve, chest, carding comb and undergarment) suggesting that a carbon containing layer is present in the priming layer in these these green areas (fig. 25).

Finally a thin paint layer was applied. XRF analysis of an area in the red robe revealed peaks for mercury (Hg), a characteristic element of vermilion (Appendix 1).



Figure 27. Photomicrograph, area of vermilion and red glazed robe

The cross-section and photomicrograph shows that this area consists of a layer of vermilion with a darker transparent red glaze on top (figs. 26 and 27). XRF analysis showed further that the green paint layers (right inner sleeve, chest, carding comb and undergarment) contain copper, suggesting the presence of a copper containing green such as Verdigris or Emerald green (figs. 28 -

31). The dark appearance of these areas might be due to the darkening of copper and/or the binder, a common phenomenon.



**Figure 28.** Photomicrograph, browned copper green area in proper right sleeve



Figure 29. Photomicrograph, browned copper green area in centre of robe



**Figure 30.** Photomicrograph, browned copper green area in the carding comb



Figure 31. Photomicrograph, browned copper green at the bottom of the robe

XRF analysis detected copper and lead in the hands (Appendix 1). In the photomicrographs irregularly shaped blue particles, characterisitic for azurite, are visible; suggesting that they were painted using lead white mixed with azurite (figs. 32 and 33). The face was painted using a mixture of vermilion, lead white and iron oxide pigments (XRF indicated the presence of mercury, lead and iron). Paint from the iris of the figure's left eye probably also contains azurite, added to make the eye appear slightly cooler to the viewer (fig. 34). A red and green glaze were applied directly onto the gilding to create the effect of lustre, to imitate the sparkle of jewels of the mitre. Unfortunately, most of the green and red areas in the mitre have been covered by overpaint, with the original glaze only visible along the edges of the 'jewels' (fig. 35).



Figure 32. Photomicrograph, area in proper right hand



Figure 33. Photomicrograph, area in proper left hand



Figure 34. Photomicrograph, iris of proper left eye



Figure 35. Photomicrograph, red 'jewel' in mitre showing overpaint

The punching in the glided area was made with three different tools to create various patterns (figs. 36 and 37). Not all of the tool marks made with probably the same punch look the same, suggesting a difference in how much pressure was applied on the tool. There are incised lines along the left-hand side of the painting to lay out the pattern, although not all of the motifs made with the tools follow these lines. The punchwork outlining the shape of the crozier is made with only one of the three tools, then a black painted reinforcement was applied along the outline. The punchwork appears to merge with the patterns created in the background possibly making it illegible suggesting why a black painted reinforcement was applied. The pattern on the right hand side is an identical mirror image of the left side, however the far side of the pattern on the right is not there or not visible due to the obstruction of the frame. The general appearance of the punchwork is rather clumsy.



**Figure 36.** Photomicrograph, type 1 and type 2 tool marks



Figure 37. Photomicrograph, type 3 tool mark

From the construction of the panel, the materials and techniques employed for both the gilded and the painted areas, coupled with the knowledge that during Spain at this time certain phases of the construction process were outsourced, we can begin to see that more than one hand was responsible for the end result. Though it is not clear at which point in the making of the panel support it may have entered the painter's workshop, we can surmise that the gilded area and the painted area were dealt with separately: the delicacy of the paint application, and the care with which it has been handled and manipulated, stands in stark contrast to the rough nature of the punchwork. The incised lines separating the gilding from the painting would further suggest that two hands—at the very least—were responsible for the painting. The lines were created to indicate where the gilding needed to be placed. There are areas of paint that overlap with the gilding deliberately, like the jewels in the mitre, and some areas that don't, for example in the left sleeve where the paint extends over the gilding unintentionally. This suggests that the gilding was done first and then the painting was completed. The punchwork appears to have been applied at the end as some of the punchwork sits on top of the painted area.

# **Conclusion and Possibilities for Further Research**

Our research and technical examination have given us a provisional indication of when, where, and how the panel was made: it is an oil painting on panel of Saint Blaise, stylistically and technologically in keeping with Spanish traditions of the sixteenth century. We have not identified the type of wood used for the painting, which might further help to pinpoint even the exact province. But technical investigation revealed much about the process of constructing the panel support and the application of the painted surface, providing us with a deeper understanding of Spanish workshop practices in the sixteenth century.

Future research would of course benefit from a comprehensive analysis into all four paintings of the potentially same altarpiece. However, stylistic comparisons alone cannot definitively ascribe these images to the same altarpiece. If they were once paired in some way, questions regarding the choice of saints and their importance to a sixteenth-century Spanish audience could offer greater knowledge of both the images' meaning and the church they may have been displayed in. In addition, investigation into the label on the back of the painting may help piece together the mystery of the painting's journey over the last 400 years. Unfortunately, a number of research avenues became unavailable to us because of the COVID-19 pandemic, and as such, many questions remain. Yet the close visual, technical and historical examination that we conducted over the past few months has revealed a glimpse into a particular period and time, and we hope that our report will inspire future research.

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#### **Bibliography**

- Aurenhammer, Hans. Lexikon der Christlichen Ikonographie Vol. I: Alpha und Omega, Christus und die vierundzwanzig Altesten. Vienna: Verlag Brüder Hollinek, 1959-1967.
- Bacci, Michele. 'Devotional Panels as Sites of Intercultural Exchange.' In *Domestic Devotions in Early Modern Italy.* Edited by Maya Corri, Marco Faini, and Alessia Meneghin. Leiden: Brill, 2019.
- Banks, M.M. 'St. Blaise's Comb.' *Folklore* 45, no. 1 (1934): 77-78. URL: <u>https://www.jstor.org/stable/1255762</u>.

Baring-Gould, S. Lives of the Saints, Vol. II. London: John Hodges, 1872.

- Brown, Jonathan. *Painting In Spain: 1500-1700.* New Haven: Yale University Press, 1998.
- Britannica Academic, Encyclopaedia Britannica. 'St Blaise'. 10 February 2018. URL: <u>https://academic-eb-</u> <u>com.ezproxy.leidenuniv.nl:2443/levels/collegiate/article/St-Blaise/15579</u>. Accessed 15 May 2020.
- Durham, M.E. 'St Blaise. Blasius. Biagie.' *Folklore* 45, no. 2 (1934): 163. URL: <u>https://www.jstor.org/stable/1256076</u>.
- Hodge, Sam., Marchant, Roy., and Spring Marika. 'The constitution of a large
  Castilian retable: a study of techniques and workshop practices', in *Painting Tecniques History, Materials and Studio Practice*, ed. Ashok Roy and Perry
  Smith (Contributions to the Dublin Congress 7-11 September 1998), pp. 70-76
- Lewis, Elizabeth. 'The Iconography of St Blaise.' PhD Dissertation Submitted to the Graduate School of Georgetown University, 1976.

Nash, Susie. Northern Renaissance Art. Oxford: Oxford University Press, 2009.

- Nash, Susie. *Late Medieval Panel Paintings: Materials, Methods, Meanings.* London: Sam Fogg, 2011.
- Nurse, Julia. 'St Blaise the Throat Healer.' In *From The Collections, The Wellcome Collection Online.* URL: <u>http://blog.wellcomelibrary.org/2016/04/st-blaise-the-</u> <u>throat-blesser/</u>. Accessed 15 May 2020.
- Pacheco, Francisco. *El Arte de la Pintura.* Edited by F.J. Sánchez Cantón. Madrid: Imprenta y Editorial Maestre, 1965 (1638).
- Rodríguez-López, Ainhoa, Narayan Khandekar, Glenn Gates and Richard Newman. 'Materials and Techniques of a Spanish Renaissance Panel Painting.' *Studies in Conservation* 52, no. 2 (2007): 81-100.
- S. Santos Gómez, M. San Andrés Moya, J.L. Baldonedo Ródriguez, and O. Conje Sastre. 'Contribution to te study of grounds fro panel painting of te Spanish school in the fifteenth and sixteenth centuries', in *Painting Tecniques History, Materials and Studio Practice*, ed. Ashok Roy and Perry Smith (Contributions to the Dublin Congress 7-11 September 1998), pp. 115-120
- Sobré, Judith. Behind the Altar Table: The Development of the Painted Retable in Spain, 1350-1500. Columbia: University of Missouri Press, 1989.
- Véliz, Zahira. *Artists' Techniques in Golden Age Spain.* Cambridge: Cambridge University Press, 1987.
- Véliz, Zahira. 'Wooden Panels and Their Preparation for Painting from the Middle Ages to the Seventeenth Century in Spain.' In *The Structural Conservation of Panel Paintings: History of Panel Making Techniques,* part two. Edited by Kathleen Dardes and Andrea Rothe. Los Angeles: Getty Publications, 1998.

de Voragine, Jacobus. *The Golden Legend: Readings on the Saints.* Translated by William Granger Ryan. Princeton and Oxford: Princeton University Press, 1993.

# Appendices

Appendix I: XRF analysis

Area	Elements present	Inference about Pigments present
Highlight in red robe	S, Ca, Fe, Hg, Pb	vermillion, lead white, iron oxide, calcium (possibly gypsum)
Dark chest area	Ca, Fe, Cu, Pb	lead white, iron oxide, copper green, calcium (possibly gypsum)
Dark area in proper right sleeve	Ca, Fe, Cu, Pb	lead white, iron oxide, copper green, calcium (possibly gypsum)
Dark area in carding comb	Ca, Fe, Cu, Pb	lead white, iron oxide, copper green, calcium (possibly gypsum)
Dark area in the lower robe	Ca, Fe, Cu, Pb	lead white, iron oxide, copper green, calcium (possibly gypsum)
Proper right palm	Ca, Fe, Cu, Pb	lead white, iron oxide, azurite, calcium (possibly gypsum)
Proper left hand	Ca, Fe, Cu, Pb	lead white, iron oxide, azurite, calcium (possibly gypsum)
Proper left eye	Ca, Fe, Cu, Pb	lead white, iron oxide, azurite, calcium (possibly gypsum)
Right cheek	Ca, Fe, Cu, Hg, Pb	vermillion, lead white, iron oxide, calcium (possibly gypsum)
Proper right wrist	Ca, Fe, Cu, Pb	lead white, iron oxide, azurite, calcium (possibly gypsum)
Lowlight in white robe	Ca, Fe, Pb	lead white, iron oxide, calcium (possibly gypsum)
Yellow highlight in proper left bench	Ca, Fe, Hg, Pb	vermilion, lead white, iron oxide, calcium (possibly gypsum)