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Maarten van Heemskerck and Pieter Saenredam. Cooperation between the National Museum in Warsaw and the J. Paul Getty Museum in Los Angeles

The Getty Center, its monumental white travertine building resembling a splendid acropolis standing on a hilltop in Los Angeles at the base of the Santa Monica Mountains, encompasses several important art institutions (**fig. 1**). It includes one of the two branches of the J. Paul Getty Museum, which contains an impressive collection of art ranging from the Middle Ages to the twentieth century, as well as a collection of photographs (its other branch, which was built first as the original Getty Villa in Malibu on the Pacific, houses ancient art), the Getty Research Institute and the Getty Conservation Institute. It is also home to the Getty Foundation and the J. Paul Getty Trust of this wealthiest art institution, brought to life thanks to the legacy of the original art collection and the financial means of the oil magnate J. Paul Getty (1892–1976). The principles of the Getty Trust's mission are: "service, philanthropy, teaching and access."

The National Museum in Warsaw (**fig. 2**) has been fortunate to take part twice in research and conservation projects funded by the Getty, and to learn about how its mission statement translates directly into practice. For many years now, the J. Paul Getty Museum has developed a program of conservation partnership, working together with numerous American and European collections. Of the countries of the former East bloc, the Old Masters galleries in museums in Dresden, Budapest and Bucharest have taken part in it. The project has also allowed two paintings from the Collection of European Old Masters of the National Museum in Warsaw to undergo in-depth conservation treatment and technical examinations in the conservation studio of the Getty Museum.

These two works were painted by Dutch artists active in Haarlem a hundred years apart: a painting by Pieter Saenredam (1597–1665), *Interior of Saint Bavo's Church in Haarlem* (1635) visited Los Angeles in 2002–2003; ten years later, in 2010–13, came the turn of the *Ecce Homo* triptych by Maarten van Heemskerck (1498–1574), painted in 1544. Both are true gems in the Collection of European Old Masters, and this conservation treatment restored them to their near-original appearance, revealing the splendour of their masters' expert skills. Both had survived in good condition – conservation consisted merely of removing discoloured varnish and older restorations. It also created an important opportunity to conduct an insightful examination of the artists' techniques and painting materials.

Crowning the research on the Van Heemskerck triptych was the publication *Drama and Devotion. Heemskerck's* Ecce Homo *Altarpiece from Warsaw*,[1] but no academic article has

[1] Anne T. Woollett, Yvonne Szafran, and Alan Phenix, *Drama and Devotion. Heemskerck's* Ecce Homo *Altarpiece from Warsaw* (Los Angeles: The J. Paul Getty Museum, 2012).

appeared yet to describe the investigation of Saenredam's painting. For this reason, a concise analysis will be presented here.

In 1988 the J. Paul Getty Museum purchased a very important preparatory drawing for the Warsaw composition. In 2002 the Getty hosted an exhibition from Utrecht on the master of painted architecture entitled *Pieter Saenredam. The Utrecht Work*.[2] As an addendum to the main exhibition, the organizers presented three of Saenredam's Haarlem works showing the same view within the church of Saint Bavo in Haarlem, which splendidly illustrate Saenredam's painstaking and discerning working method. The first was a site drawing made directly in the church (from the Geemente Archief in Haarlem), the second – a slightly modified construction drawing from the Getty's own collection and the third – the final painting from the National Museum in Warsaw, which was done strictly according to the construction drawing. On this occasion, the Warsaw *Interior of Saint Bavo's Church in Haarlem*, was subjected to a conservation treatment, as well as to the following technical examinations: ultraviolet photography, X-radiography and infrared reflectography (IRR). The conservation process itself was also documented. Charged with this work on behalf of the host museum was Yvonne Szafran, at the time a senior conservator, while Maciej Monkiewicz, curator of Dutch paintings, coordinated the joint project on behalf of the National Museum in Warsaw.

The painting *Interior of Saint Bavo's Church in Haarlem*, one of about sixty surviving works by Saenredam, belongs to the most valuable works in the Gallery of European Old Masters of the National Museum in Warsaw[3] (**fig. 3**). Even though the interest in architecture in Netherlandish art dates back to the sixteenth century – to the virtuoso renderings of perspective in Hans Vredeman de Vries's paintings of fantastical architecture – Saenredam was the first painter to depict his country's actual buildings, primarily churches and sometimes town halls. In an earlier period, his favourite subject was this very Church of Saint Bavo, a monumental Late Gothic church in his hometown (where he was buried). Saenredam documented its interior in twelve paintings; the first, also in the Getty collection, was dated 1628, and he continued to paint the others until the mid-1630s. The last one was done after a longer break and bears the date 1660 (Worcester Art Museum). Another church, portrayed more often than any other, was the Mariakerk in Utrecht.

Characteristic of Saenredam's works is the unique harmony between their clear architectural lines and a refined palette of nearly monochromatic colours. In their construction, a fundamental outstanding feature is a precisely drawn perspective and a low point of view. The Gothic church interiors, stripped of any "Catholic" decoration in the post-Reformation Calvinist spirit (especially in the wake of the wave of iconoclasm), have whitewashed walls and

[2] *Pieter Saenredam. The Utrecht Work. Paintings and Drawings by 17th-century Master of Perspective*, Liesbeth M. Helmus, ed., exh. cat., JPGM, Los Angeles, 16 April – 7 July 2002 (Los Angeles: The J. Paul Getty Museum, 2002).

[3] Pieter Saenredam, *Interior of Saint Bavo's Church in Haarlem*, oil, panel, 33.8 × 27.8 cm, inv. no. M.Ob.495 MNW, signed and dated on the frieze over the triforium: *Anno-Pieter Saenredam fecit 1635*. Discussed in detail and provided with a full bibliography by Maciej Monkiewicz in the exhibiton catalogue: *Europäische Malerei des Barock aus dem Nationalmuseum Warschau*, Rüdiger Klessmann, ed., Herzog Anton Urlich-Museum, Braunschweig, 24 November 1988 – 29 January 1989; Centraal Museum, Utrecht, 18 March – 7 May 1989; Wallraf-Richartz Museum, Cologne, 19 July – 8 October 1989; Alte Pinakothek, Munich, 3 November 1989 – 14 January 1990 (Braunschweig: Herzog Anton Urlich-Museum, 1988), pp. 79–81, cat. no. 20 (under fig. 33, the place where the construction drawing is kept is mistakenly given as Gemeente Archief in Haarlem); *Sztuka cenniejsza niż złoto. Obrazy, rysunki i ryciny dawnych mistrzów europejskich ze zbiorów polskich*, Anna Kozak, Antoni Ziemba, eds, The National Museum in Warsaw, March–May 1999 (Warsaw: Muzeum Narodowe w Warszawie, 1999), pp. 392–3, cat. no. 161; Gary Schwartz, Marten Jan Bok, *Pieter Saenredam. The Painter and His Time* (Maarssen: Gary Schwartz; The Hague: SDU Publishers, 1990), p. 259, cat. no. 35, fig. 123, p. 113 and pp. 78, 121, n. 9:25, p. 327; n. 14:26, p. 332.

pillars; miniature human figures make an appearance, emphasizing the monumental scale of its architecture and guiding the viewer's gaze upward, towards its arches and vaulted ceilings.

Other features typical of this artist's work evade aesthetic categories; they include a specific way of showing light and creating an impression of calm and concentration that emanates from them. The interiors of Saenredam's churches are suffused with a spirit of asceticism and, somewhat paradoxically – thanks to the light colours and the light itself –serenity. The title of the Getty Museum's exhibition in 2002, "The Sacred Spaces of Saenredam," very accurately conveys this almost religious spirit of the master's paintings, which, even though they render the buildings and interiors very precisely, dispose the viewer towards contemplation rather than to recognize them as documents of specific places. In this respect, no Dutch painter of architecture has rivalled the master from Haarlem. At the same time, his and other artists' paintings testify to their fiery patriotism and pride in the beauty of buildings, and in the rich Netherlandish tradition.

We can presume on the basis of surviving sketches and preliminary drawings that Saenredam's workshop practice did not change over the course of his artistic production. The first stage of a work was a freehand drawing made *naer het leven*, from nature, taking into account actual dimensions and all architectural and decorative details. Next, in his workshop, after making elaborate calculations of perspective, Saenredam would make the construction drawing, in which he transformed the real view into an ideal one, and which became the precise model for his final work. After its reverse was covered with a black substance, the image would be transferred onto a grounded panel by tracing. Only few of his freehand site drawings and construction drawings survive, but perhaps not all his paintings began as construction drawings. Another method used for transferring a small-scale preliminary sketch to the prepared painting support was squaring. A grid pattern applied on the sketch was repeated – scaled up in size – on the white ground of the painting as a help while copying parts of the composition. Usually it was not done from the initial site drawing but from a more elaborate *modello*. Geraldine Heemstra however, believes that for some paintings Saenredam used site drawings directly for grid scaling.[4]

With the *Interior of Saint Bavo's Church in Haarlem* from Warsaw, we have been exceptionally fortunate that the material evidence of all three phases of Saenredam's work has survived. They all show the view through the choir from the Brewers' Chapel onto the Christmas Chapel across from it. The site drawing (at the Gemeente Archief in Haarlem) represents this fragment of the church in a broader view than do the later depictions; here, an additional part of the transept can be seen on the left. The whole is shown from a slightly more distant viewpoint, perhaps through a *camera obscura*.[5] Closest to the viewer is a pillar, which we can see here in its entirety, with an attached half-column, and which in the two subsequent works flanks them from the left edge, but which each time is shown as gradually narrower. In the Warsaw painting, only a thin strip remains, which, together with the opposite corresponding pillar, forms a subtle frame for almost symmetrical central view, which shows the dominant sequence of "receding" pointed arches. In the Haarlem drawing, a plaque bearing an epitaph (which survives to this

[4] Geraldine van Heemstra, "Space, Light and Stillness. A Description of Saenredam's Painting Technique," in *Pieter Saenredam. The Utrecht Work...*, op. cit., pp. 73–90, provides a list of earlier detailed literature about Saenredam's painting techniques; for a description of the transfer of a composition drawing onto the painting support using a grid, see p. 75.

[5] Pen and brown ink, black chalk, lights in white chalk, on brownish paper, 26.6 × 38.3 cm, Gemeente Archief, Haarlem, see Schwartz, Bok, op. cit., p. 259, cat. no. 36, p. 11, fig. 122.

day) in a cartouche with a scrollwork ornament is shown on the pillar with the half-column, on which the artist put the inscription saying that he had drawn the sketch on 14 October 1634. Saenredam had the habit of placing detailed notes on his drawings, which now are a source of much valuable information. This is the case with the construction drawing at the Getty Museum, in which the pillar on the right bears a long inscription: *dit aldus geteyckent in November | int Jaer 1634. is en gesigt inde | grootte kerck binnen Haerlem. | eende is even dus groot geschildert. | Dit volleijndt ofte= | ghedaen met schilderen | Den 15.s october 1635*. "This was drawn in this way in November of the year 1634. [It] is a view of the Great Church in Haarlem, and was painted in the same size as this" [emphasis HB]. And below: "This is completed or= done with painting on 15 October 1635."

The drawing at the Getty[6] narrows the initial view to create a symmetrical composition and eliminates unnecessary extras and decorations (**fig. 4**). Missing is not only the deeper part of the interior of the church on the left, but also the Mannerist epitaph plaque and the chandelier hanging in the centre of the choir (which then reappears in the same position in the Warsaw painting) as well as the ship models accompanying it. Saenredam drew rigorous vertical and horizontal construction and perspective lines, marked the low vanishing point where all the lines perpendicular to the surface of the drawing converge and added three small figures which had been absent in the initial sketch and which serve to emphasize the monumental proportions of the architecture and the loftiness of the Gothic ceiling. The vantage point was also brought closer to the viewer, thus giving the represented fragment of the interior greater depth. Despite the fact that it is "merely" a construction drawing, thanks to the artist's use of sophisticated techniques including red chalk, pen, and watercolour wash in a subtle colour spectrum, slightly modified proportions and a sublime play of light and shadow, it successfully creates the same impression of calm, space and spirituality characteristic of the final painting. It is because the drawing also served as a *modello* for chiaroscuro elaboration. During his work on the construction drawing Saenredam introduced changes only in the placement of the figures: a *pentimento* of an erased figure is visible against the base of the column at left, next to the figures of a man and a woman, and something like the shadow of another figure lingers in front of the first column on the right. In the Warsaw painting, the number and positioning of the figures are completely different, but the major part of the representation matches faithfully the construction drawing, since it was transferred to the painting support by tracing. The verso of the drawing is covered with black chalk,[7] probably containing graphite, while on the recto, incisions visible along the lines testify to the use of a pointed instrument. Consistently with the usual practice, the preparatory sketch had been placed on top of the white prepared panel, and the composition traced on the ground layer with a sharp stylus that followed its contours. The vanishing point, which is marked by a clear dot in the Getty drawing, in the painting was hidden under the collar of the woman represented the very centre of the composition. The underdrawing thus obtained was then covered by layers of imprimatura and paint. Infrared reflectography clearly reveals the underdrawing in the Warsaw painting (**fig. 5**).

[6] Red chalk, graphite, pen and brown ink and watercoluor, incised for transfer (recto); rubbed with black chalk for transfer (verso), 37.5 × 39.1 cm, The J. Paul Getty Museum, Los Angeles, inv. no. 88.CG.131.

[7] The term "black chalk" is not used in Polish terminology and raises much controversy among Polish conservators; however, it is broadly used in English-language literature on painting techniques. On the "black chalk" known also as *terra nigra*, *pietra nera* or *lapis niger* see, i.a., *On the Trail of Bosch and Bruegel. Four Paintings United under Cross-examination*, Erma Hermens, ed. (London: Archetype Publication Ltd; Copenhagen: Statens Museum for Kunst – National Gallery of Denmark and CATS, 2012), p. 62.

Yet the construction drawing from Los Angeles and the final painting in Warsaw have different dimensions, which translates into the distance between the pillars flanking the composition, and at the same time dramatically emphasizes the disparity between reality and the written testimony by Saenredam himself ("And it was painted in the same size" – sic!). The dimensions of the drawing are 37.5 × 39.1 cm, while the painting measures 33.8 × 27.8 cm. The difference in height is thus 3.7 cm (compositionally perceived only in the upper part of the painting), and in width a whole 11.3 cm. The description of the conservation process and research at the Getty tells us that all the "edges of the painting were carefully examined to investigate the issue of the painting's original dimensions."[8] Along the edges there were some areas of overpaint, but even when these were removed it was impossible to draw definitive conclusions. Since none of the edges of the panel are bevelled, it is likely that it could have been altered at an unknown time. Despite the fact that there are incisions in the construction drawing around the entire composition (on the edges of the paper), and the author's own statement that the painting was executed in the same size as the sketch, Yvonne Szafran does not rule out the possibility that the artist himself may have adapted the composition as he worked on the painting.[9] Scrutinizing the two drawings and the painting, it is easy to come to the conclusion that Saenredam was trying to narrow and lengthen the composition gradually and to focus the view, so as to achieve a prospect which would emphasize the sequence of pointed arches and the image of a unique canopy of vaults as well as the sense of the monumental architecture in a most clear and expressive way. However, the absence of bevelling also at the bottom edge of the painting, where the drawing and painting fully correspond (even though it is impossible to see traces of the transfer of the construction drawing's bottom line, but perhaps only because it is hidden under paint layers), may undermine this hypothesis. The small areas of paint loss along all of the edges (primarily vertical ones) would indicate that the alteration of the size occurred after the whole composition (extending beyond the existing borders) had been painted. Incisions in the paper of the construction drawing confirm that it was transferred as a whole onto the painting support. Would Saenredam have intruded so dramatically in his work already after it had been painted so as to achieve a better effect? This question must remain unanswered.

The technical examination at the J. Paul Getty Museum did not include an analysis of paint samples taken from the picture, an invasive method that is not favoured for small and well-preserved paintings. The pigments were identified with X-ray fluorescence (XRF) spectroscopy. Smalt was discovered in the Warsaw painting in the part of the sky seen through the window; a stereo binocular microscope also confirmed the presence of ultramarine particles in this area. Furthermore, copper was revealed on the blue shield hanging on the left pillar, evidence that azurite had been used. The wooden parts of the organ casing are covered with gold leaf, and the organ pipes with silver leaf[10] (**fig. 6**).

The use of these materials is typical of Saenredam's workshop practice. It was very labour- and time-consuming because of both the very peculiarity of the genre of "perspectives" and the

[8] Yvonne Szafran, *JPGM. Treatment Record*, document created on 22 January 2003, p. 1. A copy of the document is also kept in the Conservation Workshop of Sculpture and Painting on Wooden Supports of the National Museum in Warsaw.

[9] Ibid., p. 2.

[10] Ibid.; Anna Schoenemann, *Analytical Report*, document prepared on 10 January 2003, pp. 1–2. A copy of the document is also kept in the Conservation Workshop of Sculpture and Painting on Wooden Supports of the National Museum in Warsaw.

artist's temperament, but his comfortable financial situation also played a role. As he prepared a wooden panel for painting, he would first size it to prevent the absorption of oil from the paint, then apply a layer of ground so thin that the structure of the wood was clearly visible through it. This seemed a conscious aesthetic choice, as the warm colour of the oak showing through the ground would influence the final appearance of tones; the subsequent layers of paint are also very thin and usually transparent. The cream-coloured chalk ground, which is very smooth after being polished with pumice stone or evened out with a knife, is important for creating the impression of light in the church interiors. Usually complete underdrawing, without any major changes or corrections, can be found on the ground layer. If transferred from the construction drawing by tracing, the vertical lines were executed with a ruler and the curved lines of the vaulting by hand. For transfer, the verso of the drawing was rubbed with black chalk containing graphite. The next layer of so-called dead colouring, or underpainting, played an essential role in the modelling of the finished painting and its tonal effects. He then applied subsequent subtle layers of transparent and opaque paints, often leaving the underpainting visible, which created an impression of an optical interaction between them. Superposing layers of various thickness of darker paint on a warm, light underpainting or, on the contrary, light layers onto a darker and colder underpainting, creates unusual luminosity effects. Amazingly, this very rich variety of tones and colours is obtained with a limited palette, which is astonishing in comparison with the more complex method of gilding. Saenredam insisted on employing gold and silver leaf, even though since the sixteenth century other pigments were being used to imitate them.[11] By creating contrasts with the sublime but virtually monochromatic range of colours in his paintings, adding precious metals elevated his works to the rank of gems.

The next piece of art selected for study and conservation at the J. Paul Getty Museum differs diametrically from Saenredam's painting in both its original function and its dimensions and painting techniques.

In September 2009, acting on an idea of the cultural attaché at the Polish Consulate General in Los Angeles, Małgorzata Cup, a group of representatives of the Getty Museum visited Poland; they included its then-acting director David Bomford, senior conservator of paintings Yvonne Szafran and senior curator of paintings Scott Schaefer. They visited several Polish museums in search of a painting that would be the most suitable candidate for the coming conservation partnership project. They chose the triptych by Maarten van Heemskerck, *Ecce Homo*, from the collection of the National Museum in Warsaw. A year later, in October 2010, the triptych took the complicated trip by land and air to California. This time, the agreement covered a full conservation partnership, to include direct cooperation with the conservators of the lending institution. Both sides' specialists contributed to the project's success. However, the publication documenting various aspects of the research and the focussed exhibition that crowned the project owed significant financial support to the Getty Museum's Paintings Conservation Council. It was also thanks to the council's assistance that the exhibition could travel to Poland and be displayed together with the restored triptych in one of the final events in the celebrations of the 150th Anniversary Year of the National Museum in Warsaw (18 May – 31 July 2013).

Yvonne Szafran (with Laura Rivers and Tiarna Doherty) guided the work on the painting in the Getty Museum's conservation laboratory. The technological examinations were carried

[11] Van Heemstra, op. cit., pp. 85–6.

out at the Getty Conservation Institute by Alan Phenix and his team, including Joy Mazurek, Catherine Patterson and Karen Trentelman. Iwona Stefańska, a National Museum in Warsaw conservator, took part in the initial and final stages of the project for a few weeks each time, working hand in hand with her colleagues in Los Angeles (**fig. 7**).

The *Ecce Homo* triptych is probably the most famous Dutch Renaissance work in Poland.[12] The artist, the Haarlem painter Maarten van Heemskerck, spent four years (1532–36) in Rome, studying the works of his contemporaries, foremost among them Michaelangelo and Francesco Salviati, and exploring ancient ruins and sculptures. Two albums of drawings documenting these relics have survived in the Kupferstichkabinett in Berlin. Remarkably, we know that Saenredam himself also owned some Van Heemskerck sketches, and used them as models for four of his paintings of Rome's classical buildings.[13] After returning to Haarlem, Van Heemskerck methodically enriched his own country's art with Italianate and classical motifs, and also indulged his predisposition for Mannerist expression and dynamism. His elongated figures are often represented in abrupt movement and in crowded spaces. Glaringly vivid, shimmering colours strengthen their expressiveness. But compared to his other paintings, in which restless forms and colours dominate, the Warsaw piece stands out with its harmonious synthesis of the realistic Netherlandish tradition in rendering portraits and the Italian tradition in presenting religious scenes.

The triptych, with the date 1544 recorded twice on its frame,[14] was created eight years after the artist's return from Italy, at a time when his workshop practice was fully formed and grounded. Van Heemskerck had learnt some secrets of the technology used by the Italian masters earlier, in the workshop of his teacher Jan van Scorel, one of the first "Romanists," artists from the Netherlands who travelled to Italy and studied there. He added to this knowledge during his stay in Rome and, after returning to the Netherlands, introduced these new methods and materials into traditional Northern techniques. They contributed to a speeding up of his already dynamic creative process. The Netherlandish art theoretician and biographer Karel van Mander (1548–1606) highlights Van Heemskerck's industriousness, thrift and exceptional speed in painting.[15]

[12] Maarten van Heemskerck, *Ecce Homo* triptych, oil on panel; framed (closed): 188.6 × 132.7 × 13.2 cm; framed (open): 188.6 × 260 × 13.2 cm; inv. no. M.Ob.595 MNW; inscription and date on frame, repeated on both pilasters: *ESPOIR | CONFORT | DRENCKWAIRT | 1544*. Discussed earlier in: *Malarstwo francuskie, niderlandzkie, włoskie do 1600*, collection catalogue edited by Jan Białostocki and Maria Skubiszewska and staff (Warsaw: Muzeum Narodowe w Warszawie, 1979), pp. 94–5, cat. no. 66, figs 74–5 (Jan Białostocki, Gabriela Lipkowa), includes an earlier bibliography; Rainald Grosshans, *Maerten van Heemskerck. Die Gemälde* (Berlin: Horst Boettcher Verlag, 1980), pp. 159–62, cat. no. 46, figs 60, 70; *Kunst voor de Beeldenstorm: Noord-Nederlands Kunst, 1525–1580*, Jan Piet Filedt Kok, Willy Halsema-Kubes, Wouter Th. Kloek, eds, exh. cat. (Amsterdam: Rijksmuseum, 1986), addendum (n.p.), cat. no. 135 (Jefferson Cabell Harrison, Jr.) – I am very grateful to Anne T. Woollett for drawing my attention to this addendum, which is not present in all the copies of the publication, and for sending it to me; Jefferson Cabell Harrison, Jr., *The Paintings of Maerten van Heemskerck: A Catalogue Raisonné*, dissertation, University of Virginia, Charlottesville, 1987, pp. 475–86, cat. no. 43; for a detailed summary, see *Transalpinum. From Giorgione and Dürer to Titian and Rubens. European Painting from the Kunsthistorisches Museum in Vienna, the National Museum in Warsaw and the National Museum in Gdańsk*, Dorota Folga-Januszewska, Antoni Ziemba, eds (Lesko: Bosz, 2004), p. 158, cat. no. 37 (Hanna Benesz, with earlier bibliography).

[13] Schwartz, Bok, op. cit. p. 272, cat. nos 111–4.

[14] Anne T. Woollett was the first to notice that the date 1544 had also been placed on the opened book held by Saint Margaret on the right wing, next to the illegible text beginning "Margarieta s...," see Woollett, Szafran, and Phenix, op. cit., p. 15.

[15] *Karel van Mander: The Lives of the Illustrious Netherlandish and German Painters from the first Edition of the Schilder-boeck (1603–1604): Preceded by the Lineage, Circumstances, and Place of Birth, Life, and Works of Karel van*

Van Heemskerck painted the Warsaw triptych on a commission from Jan van Drenckwaerdt, an important city official in Dordrecht, who ordered it as an epitaph for himself and his second wife, Margaretha de Jonge van Baertwyck, who died in 1542 (**figs 8–9**). The couple are shown in prayer at prie-dieux (decorated with their coats of arms), in eternal contemplation of the scene of "Ecce Homo." They are accompanied by their patron saints, who hold their characteristic attributes: Saint John the Evangelist a chalice filled with poison and Saint Margaret of Antioch an open book of the scriptures and the cross that helped her to defeat the dragon (Satan) lying at her feet. The figures of the saints are also rendered in the Italianate manner, analogous to the style of the central panel of *Ecce Homo*, with a characteristic effect of "wet robes," which reveals the forms of their bodies. The same patron saints are portrayed on the reverse sides of the triptych's wings, *en grisaille*, a monochrome grey-brown colour range as fictive stone sculptures, motifs present in the old Netherlandish tradition since Jan van Eyck.

The triptych's central panel illustrates an event in the Gospel According to John (J 19: 4–5), Pilate escorting Jesus, who has just been lashed, onto the porch of the praetorium to pronounce the words *Ecce Homo* ["Behold the Man"] to the wild mob, hoping perhaps that on a holiday the rabble would decide to release Christ instead of Barabas. The artist's Italian education and his fascination with both classical art and Michaelangelo's work can be seen in the general Mannerist quality, in the presentation of Pilate in the contrapposto known from classical sculpture and in the expressiveness of the muscular figures. This scene, through its distinctive style and frontality, plays the role of a picture within a picture, with a magnificent original sculpted wooden frame adding to the effect. Pilasters with a candelabrum ornament, emblematic motifs and the donors' family motto *Espoir confort Drenckwairt* [Hope is the comfort of the Drenckwaerdts] support the arch of the illusionistic coffered vaulting. Anne T. Woollett[16] gives an in-depth analysis of the rich ideological programme of the altarpiece and its frame, complementing earlier statements by Rainald Grosshans in his monograph of Van Heemskerck.[17]

Woollett's own archival research in Dordrecht gives us a better understanding of the donor Jan Drenckwaerdt in the context of his prestigious functions and the social structure of his town in the sixteenth century. Jan, son of the mayor of Dordrecht, was one of the most eminent patricians in Holland's oldest town. He served as sheriff, a post comparable to today's prosecutor, for many years (from 1516 to his death in 1549), at the time a position with both legal and ceremonial duties. He may have met Van Heemskerck as early as 1536, during the artist's short stay in Dordrecht on his way back from Italy. Over the next few years the painter gained well-justified renown as an innovative and modern artist, and so appeared as the best candidate for this prestigious commission. Private devotional triptychs, which often served as epitaphs, had been popular in the Netherlands since the time of Jan van Eyck. Drenckwaerdt commissioned a triptych for his family chapel in the church belonging to the Augustinian cloister in his home town. It may have been Jan Drenckwaerdt himself, a pious and righteous man, who suggested the subject of *Ecce Homo*, which appealed to the religious imagination. And the artist created a masterpiece by using two painting formulas, the traditional Netherlandish one to

Mander, Painter and Poet, and Likewise His Death and Burial, from the Second Edition of the Schilder-boeck (1616–1618), vol. 4, Hessel Miedema, ed., Derry Cook-Radmore, trans. (Doornspijk: Davaco, 1997), p. 67.

16 Woollett, Szafran, and Phenix, op. cit., pp. 1–27.

17 Grosshans, op. cit., pp. 159–62, cat. no. 46.

paint the masterful portraits of "living persons" and the Italian one to depict religious reality with its higher level of abstraction.

Woollett writes that this was not Van Heemskerck's sole commission in Dordrecht. A year later, in 1545, he made a smaller altarpiece for another patrician family, incidentally, related to the Drenckwaerdts. Its central panel is now lost. The story of the Warsaw triptych was gripping from the start. In 1572, during the dramatic events of the Dutch Revolt it needed to be taken away from its place in the Drenckwaerdts' family chapel. Jan's successor in office, his nephew Jan van Drenckwaerdt,[18] an ardent Catholic like his uncle, was forced to flee to Brussels, and the triptych was removed in a hurry and hidden in the house next door to the church belonging to the lawyer Matthijs Berck. It never returned to its assigned place, but today it is the only surviving altarpiece from the Augustinian church. It was most probably sold to a private collector in the late sixteenth century. In 1870 it surfaced at the Faber auction house in Stuttgart and was bought by a Wrocław (Breslau) town councillor, Heinrich von Korn, who then donated it to the Schlesisches Museum der bildenden Künste in his city. Around 1943, to escape bombardments, the majority of the antiquities in the city were evacuated to safe locations. After the war, during Poland's so-called restitution campaign, the triptych was taken to Warsaw, where in 1946 it was put on display at the National Museum.

Van Heemskerck's unique style can be attributed not only to his talent but also to his industriousness, emphasized by his contemporaries, his ideological conceptions and the techniques and materials he used. Van Heemskerck worked swiftly and confidently and combined his power of expression with daring colour combinations. We were able to learn about this creative process and to analyse it thanks to the multifaceted advanced scientific examinations to which *Ecce Homo* was subjected at the Getty Center. The researchers studied every layer of the painting, ranging from its wooden support and ground to the underdrawing, the imprimatura, all the way to the glazes that sealed the final effect on the painted surface. The technical analysis, on the one hand, confirmed Van Mander's historical evidence about Van Heemskerck's sparing and, at the same time innovative approach to the painter's material and, on the other, revealed new scientific facts about this painting techniques, mostly in his use of unusual paint additives and binding media. These innovations were partly responsible for the changes in the original colouring, which were revealed after the layers of grime, discoloured varnish and old retouchings were removed. Microscopic examination and chemical analysis of samples taken from the paint layer were indispensable in giving us detailed knowledge about Van Heemskerck's techniques. The latter is an invasive method, which requires permission from the owner of a painting. Watching over it was Iwona Stefańska, visiting conservator at the National Museum in Warsaw. According to accepted practices, samples were taken from the edges of the existing paint losses or from areas nearest the edge of the panel, then prepared for stratigraphic investigation, which allowed the conservators to determine the sequence of the paint layers and to identify the materials used. Here, his first technical innovations could be seen. In keeping with a common practice of his time, Van Heemskerck had applied a very

[18] Woollett, Szafran, and Phenix, op. cit., pp. 12, 23; Hermen van Duinen, "Het Dordtse drieluik 'Ecce Homo' gerestaureerd" [online] "Dordrecht net" [retrieved: 19 February 2013], at: <http://www.dordrecht.net/nieuws/2012-08-10-9787-het-dordtse-drieluik-ecce-homo-gerestaureerd.html> points out errors in Woollett's text, including one regarding the Christian name of the nephew of Jan van Drenckwaerdt the Elder. It was not Willem but Jan van Drenckwaerdt (1543–1606). This Jan van Drenckwaerdt is indeed mentioned in writings, including those by Iustus Lipsius, as the "general treasurer," *Iustus Lipsius Europae lumen et columen: proceedings of the international colloquium, Leuven, 17–19 September 1997*, Gilbert Tournoy, Jeanine de Landtsheer and Jan Papy, eds (Leuven: Leuven University Press, 1999), p. 72.

thin lead-white-based layer of imprimatura on white chalk ground, with a broad bristled brush, but instead of the usual oil binding medium he chose animal glue, which dries much faster.

Observation under a microscope also allows conservators to identify mixtures of pigments and means by which the artist obtained tonal values and optical effects. The most characteristic aspect of the artist's technique in the Warsaw triptych is his ample use of a blue pigment, smalt, which was less expensive than noble ultramarine and even azurite, which he used here too, but sparingly and, surprisingly, mostly in layers of underpainting beneath the paints containing smalt. Smalt, a powdered potassium glass that contains cobalt, became more popular in the sixteenth century, when supplies of lapis lazuli, the source of ultramarine, and azurite dropped despite their high prices. Artists most likely did not realize at the time that smalt is a pigment that over time loses its intensive blue colour with a light purplish shade, which must have been especially appealing to Van Heemskerck, who liked strong colours.[19] Van Mander describes him as frugal. This is confirmed not only by his use of the less expensive smalt, but also by a further laboratory finding: the presence of extenders. In the examined portion of blue azurite-based underpainting, it was bone white and bone ash, while in the red and black paints it was pulverized glass. The extenders gave volume to the expensive pigment and enriched the paints with additional optical effects. While the amount of the pigment was reduced, it could at the same time be more efficiently distributed in the paint; the extenders also helped the paint layer to dry faster and contributed to its transparency (especially glass). The artist's agility and the confidence of his hand can also be recognized in such technical qualities as building up paints from simple combinations of one or two pigments and a simple chiaroscuro modelling obtained by strengthening highlights with freely applied brushstrokes, while the shadows were intensified with subtle glazes. He was also aware of the differences that could result from the use of various oil-binding media. He followed the Italian practice of adding walnut oil to light colours and linseed oil, which yellowed with time, to dark areas.

The sixteenth-century author's opinion about Van Heemskerck's very fast and assured brush is corroborated not only by his use of materials such as extenders and glue in the imprimatura layer, but also by his dynamic manner of speedy and brushy application of paint, betrayed by the presence of brush hairs, which remain immersed in the paint. His spontaneous, even impulsive, way of painting is visible to the naked eye in, for example, the faces in the background, rendered almost expressionistically with a very thin layer of paint. Saint Margaret's diadem was painted in the last stage with extremely quick and confident brush strokes, the lynx fur of Jan Drenkwaert's coat[20] (**fig. 10**) with energetically applied dabs of paint. This sets Van Heemskerck's painting style apart from both earlier and his contemporary Netherlandish painters, and even from Saenredam's technique, a whole century later.

The peculiarity of Van Heemskerck's working methods has also been confirmed by a variety of non-invasive imaging techniques used in the laboratories of the Getty Conservation Institute. The whole painting's surface was examined with the aid of a stereo microscope, and with X-radiography, ultraviolet photography and infrared reflectography. The IRR revealed a very interesting difference in the way the figures were formed on the reverse sides of the wings and on the main interior scenes of the triptych. This examination detects underdrawing, a preparatory, composition design made directly on the ground, if it was executed with black pigments (whether black chalk, wood charcoal or ink), dry or with a brush, after being

19 Woollett, Szafran, and Phenix, op. cit., p. 51.

20 Ibid., pp. 64, 74–5, figs 59–60.

mixed with a binding medium. Underdrawing made with red pigment does not show up in infrared reflectography. Clear, very spontaneous original underdrawing was discovered on the reverse sides of the wings of the Warsaw triptych, while in the interior scenes the design under the paint layers is invisible (**fig. 11**). Since this is also the case in some other Van Heemskerck paintings, we can conclude that for the interiors of the triptych the artist chose red chalk or iron gall ink. A detail of his painting that can also serve as evidence of this is *Saint Luke Painting the Virgin* (Musée des Beaux-Arts, Rennes), which shows Saint Luke making an underdrawing with a brush and sepia-coloured paint.[21] This painting, dated 1545, a year after the Warsaw *Ecce Homo*, may signal that it was at around this time that the artist came to use this technique more often. But we do not know why he chose to make the underdrawing in black chalk on the reverse sides of the wings. The final paintings *en grisaille* differ in style, and have long been thought to have been made by his workshop associates.

The IRR examination and the X-radiographs showed virtually no changes in the composition that would have been made in the course of the work, except for two minor details: the swans in Jan Drenckwaerdt's coat of arms initially had raised heads and open beaks, and an additional swan was placed on the reverse, above Saint John's right arm. In the last stage of painting, the artist may have spontaneously added details such as the scalloped edge on Pilate's coat next to his hand (here, we can still see the initial simple compositional outline, **fig. 12**) or Saint Margaret's diadem mentioned earlier, which was brilliantly modelled with only a few brushstrokes, just like the small dragon rising from the chalice of Saint John on the interior of the left wing (**fig. 13**).

The original colours of the Warsaw triptych lost much of their original intensity because of Van Heemskerck's choice of unique materials (even if they were characteristic of his oeuvre). For this reason, of the many results of our investigations, the attempt at a digital reconstruction of the original colours in the Warsaw triptych is especially valuable and instructive (**fig. 14**).

The partnership agreement between the J. Paul Getty Museum and the National Museum in Warsaw included the clause that the triptych would be shown to the public in Los Angeles from June 2012 to April 2013 together with an exhibition documenting the results of its conservation and study. In an attractive way, the display presented information about Maarten van Heemskerck and the origins of the altarpiece in its historical context. Photographs and a ground plan showed the original location of the triptych in the Drenckwaerdt family chapel in the Augustinian church in Dordrecht. There was also extensive, richly illustrated information about Van Heemskerck's painting techniques, materials and pigments. Nearly full-scale photograms revealed "what lies beneath the surface" of the painting; thus, the wings and the central panel of the triptych were shown in X-radiographs and infrared reflectograms. Photographs of paint samples made under a microscope presented the layer structure and the sequence in which the artist applied the paints, as well as an analysis of the changes that occurred in them over time. The show, which was then moved to the National Museum in Warsaw, attracted large audiences in both the United States and Poland (**fig. 15**).

It can be justly stated that both institutions undoubtedly benefitted from this cooperation. The J. Paul Getty Museum, thanks to its superb laboratory equipment, once again contributed to the spread of knowledge about the creative processes involved in making eminent works of art and techniques employed by the artists, while at the same time presenting the outcome of

[21] Jill Dunkerton, Aviva Burnstock, Alistair Smith, "Two Wings of an Altarpiece by Martin van Heemskerck," *National Gallery Technical Bulletin*, vol. 12 (1988), p. 28; Woollett, Szafran, and Phenix, op. cit., p. 48, fig. 24.

the research in a publication and a documentary exhibition. The National Museum in Warsaw, on the other hand, regained its art pieces, restored in a direct partnership with full documentation, which can be used as a base for further study and interpretation. The project also strengthened the reputation of our collection, which includes works of the highest artistic value.

The author would like to offer her warmest thanks to Dr Grażyna Bastek and Iwona Stefańska for their frequent advice and help with the painting techniques and terminology.