

SCIENTIA ARTIS 8

The Brueg[H]el Phenomenon

**Paintings by Pieter Bruegel the Elder and Pieter Brueghel the Younger
with a Special Focus on Technique and Copying Practice**

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Volume I

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Introduction

The fascination exerted by the works of the illustrious Pieter Bruegel the Elder in the decades following his death in 1569 is matched only by the intense interest they generate today. At the end of the sixteenth century and in the first half of the seventeenth, the most ambitious art collectors fought over the few paintings by the master that were still on the market. This setting was the catalyst for the appearance of copies and pastiches – and even deliberate forgeries.

It was then that the elder son of Pieter Bruegel, known as Pieter Brueghel the Younger (whose name is spelled 'Brueghel' here, conforming to the signature that he adopted during the initial phase of his career) emerged as a legitimate successor, producing astonishingly faithful replicas of his father's paintings. This was all the more surprising given that they were often made after works that were by then dispersed in diverse and sometimes inaccessible private collections. Operating within the context of a sizeable studio, Brueghel supplied the market with hundreds of copies of variable quality, according to demand. This enterprise merited re-evaluation from a technical point of view: how were such vast numbers of copies produced in practice?

Although he has never received as much attention as his brother Jan Brueghel, Pieter Brueghel the Younger has not been neglected by modern critics. As early as 1907, when Georges Hulin de Loo and René van Bastelaer wrote the first great monograph on Pieter Bruegel the Elder, the work of his elder son was also thrust into the spotlight. In fact, Hulin's research concluded that Pieter Brueghel the Younger's copies could provide the key to the appearance of certain of his father's lost originals. From that moment, therefore, such copies became obligatory study material for every scholar of Pieter Bruegel the Elder.

Renewed interest in his paintings by the art market can also help to explain Pieter Brueghel the Younger's rehabilitation. In 1934 the Pieter de Boer gallery in Amsterdam organized an exhibition centred on the two sons of Bruegel the Elder, Pieter and Jan. The event was a turning point in the re-evaluation of Pieter Brueghel the Younger's art. Nevertheless, it was not until 1969 that a substantial monograph was produced on the elder of Bruegel's two sons. Written by Georges Marlier but left incomplete, it was published after his death with the help of Jacqueline Folie. In Marlier's book, Pieter Brueghel the Younger's oeuvre was studied both independently and for its relationship with the art of Bruegel the Elder. Indeed, it was through this study that the colossal scale of the son's production first began to become clear. Eleven years later, an exhibition held in Brussels gave pride of place to some of his best works, where they were shown alongside those of other members of the dynasty of artists founded by Pieter Bruegel the Elder. Yet it is Klaus Ertz who must be credited with the most important contribution to the rediscovery of Pieter Brueghel the Younger, with the first exhaustive study of his paintings: *Pieter Brueghel der Jüngere 1564-1637/38. Die Gemälde mit kritischem Oeuvrekatalog* (1998-2000). This catalogue raisonné brings together hundreds of works (including rejected attributions and studio works). Prior to this, Ertz had already organized a

remarkable exhibition of the works of Brueghel the Elder's two sons in Essen, Vienna and Antwerp in 1997-1998.¹

Marlier's and Ertz's monographs on Pieter Brueghel the Younger pass over the technical aspects of the paintings, and make no attempt to resolve the enigma of how they were physically produced. Responding to this lack, the present study offers a comprehensive study of the procedures and materials in his paintings, focusing particularly on copying practice. New evidence uncovered during the study is also exploited in order to reconsider such issues as Brueghel the Younger's models, his use of cartoons and preparatory drawings, variants amongst copies of the same composition, and workshop practice. Benefitting from rich documentation and scientific imagery gathered together over several decades, the study also lays down criteria for identifying the hand of Brueghel the Younger in what seems to be at first sight a confusingly mixed output.

An important step in this investigation was already taken during the *Brueghel Enterprises* exhibition held in Maastricht and Brussels in 2001-2002. The exhibition's organizer and mastermind Peter van den Brink presented this as an experimental show of work in progress and let visitors witness for themselves the researchers conducting their examinations. The preliminary results of the current study were published in the exhibition catalogue and presented at the subsequent colloquium. Although the present book sets forth further case studies and arrives at more insightful conclusions, the creative impetus of this memorable period of research cannot be underestimated.

The observations relating to the reproductive techniques used by Pieter Brueghel the Younger led to a complete revision of Bruegel the Elder's own *modus operandi*. One of the major objectives of the study was also to characterize the painting technique of this great figure of the northern Renaissance. The known facts have been reassessed on the basis of a penetrating analysis of several of his most important works and enriched by comparative documentation, providing the reader with a significantly enhanced understanding of the extraordinary *maestria* of Pieter Bruegel the Elder.

Completely unforeseen at the start was the fact that some of the most compelling discoveries concerning Bruegel the Elder's working methods were not to be made through examination of his own works. These findings emerged afterwards, during research on the copies executed by his elder son. Gradually it began to dawn on us that the copies contained subtle clues to Bruegel the Elder's preparatory work and procedures. The reader will be led through this detective-like investigation, which results in a closer understanding of the most hidden aspects of Pieter Bruegel the Elder's creative process.

The structure of this study allows the reader to follow the evolution of the research step by step. Volume I sets the scene with an exploration of the socio-political situation prevailing at the time, and discusses the factors underlying the singular phenomenon of artistic mimicry. This is followed by an investigation into several of Bruegel the Elder's masterpieces, leading to an overall reassessment of his panel painting technique. Volume II invites the reader to consider the complexity of Pieter Brueghel the Younger's astounding production by means of a series of pertinent case studies. The

results of this wide-reaching enquiry are analysed in Volume III, in which Pieter Brueghel the Younger's studio practice is reconsidered as a whole and clues as to his personal drawing and painting style are tracked down. Finally, the working procedures of Pieter Bruegel the Elder are re-examined in the light of the copies.

The choice of paintings singled out for detailed investigation was governed by two factors – the needs of a fundamentally comparative approach and the opportunities that presented themselves. Initially, it had been intended to limit the number of paintings examined to those in Belgian public collections, which offer a rich spectrum of material, but this was soon expanded to include numerous works in private collections and also in museums abroad. The sample was never meant to be exhaustive, neither for Pieter Bruegel the Elder nor for Pieter Brueghel the Younger. Not only would such an approach have been prohibitively costly and interminable, it would also have led to pointless repetition. It seemed to us more rational and efficient to put together a representative body of paintings demonstrating the respective working techniques of father and son. The chosen group was sufficiently rich and diverse to enable the testing of the various hypotheses and cross-comparison of the findings.

Aside from the main commentary, limited observations are also made on paintings which are similar at first sight to works by Pieter Bruegel the Elder or those of his elder son – paintings by Jan Brueghel the Elder, for example, and copies from outside the studio of Pieter Brueghel the Younger. The analysis of two extant examples of the *Fall of Icarus* attributed to Pieter Bruegel the Elder also led to a more accurate understanding of their place in Bruegel's legacy. Finally, the study of certain works by Pieter Brueghel the Younger stimulated a reconsideration of the fascinating question of his father's lost originals.

To make the best use of a rich corpus that now totals more than seventy works, an innovative working protocol was adopted from the start. In most cases, the paintings were examined *in situ*. The protocol for examinations was adapted according to the physical condition of the works of art, constraints of location, and owner guidelines. In the majority of cases, paintings were first unframed² and examined with the naked eye. Each was then extensively photographed to document their individual style and brushwork.³ For paintings studied at the KIK-IRPA and the KMSKB-MRBAB in Brussels, the binocular microscope was also used to examine and record specific details of the paint and underdrawing. Physical indices likely to reveal the utilization of reproductive means such as traced or incised reference marks were hunted down and recorded. Underdrawings, normally hidden beneath the paintings' surface, were systematically recorded in infrared.⁴ The resulting infrared reflectograms proved to be of capital importance for the understanding of the artists' transfer techniques. To this end, tracings of the painted compositions were also made onto transparent film,⁵ making it feasible to test the possibility of the use of cartoons amongst versions of the same composition. The reflectograms were also used to compare the style of the underdrawings as well as to search for any hidden motifs in the drawing or paint layers that might have been dropped in

the course of execution. X-radiography was carried out on as many paintings as possible and this proved useful in revealing the original construction of the panel support, lead white-containing *imprimatura* layers, and the various stages of the painting process.⁶

In several paintings, cross-sections were taken to establish the layer structure. These samples were examined with optical microscopy and analysed with scanning electron microscopy coupled with an energy dispersive X-ray detector (SEM-EDX). Specific pigments were sometimes identified with micro-Raman spectroscopy (MRS).⁷ A small number of samples of ground were also taken for medium analysis with high performance liquid chromatography (HPLC) or liquid chromatography tandem mass spectrometry (LC-MS/MS).⁸ X-ray fluorescence (XRF), a non-invasive technique, was occasionally performed on paintings to give a rough idea of the pigments present.⁹ Finally, dendrochronological analysis was carried out on many of the wooden supports, providing clues as to the *terminus post quem* of their manufacture as well as giving information about the geographical provenance of the oak.¹⁰

The study also involved a practical element. To help understand the various possible design transfer techniques in use in the sixteenth and seventeenth centuries, several methods were tried out. Squaring-up, tracing, pouncing and the use of the pantograph were all tested. An account of these attempts and the conclusions drawn are included in an appendix. The history of such techniques is the subject of a separate appendix.

The extensive study at the heart of this book has a long history, and the authors are happy to recall their debts towards their predecessors. The Royal Institute for Cultural Heritage (KIK-IRPA) has without doubt played a pioneering and key role in the technical study of works by Pieter Bruegel the Elder. Of prime importance was the research carried out at the end of the 1960s at the KIK-IRPA by a multi-disciplinary team of conservator-restorers, art historians and scientists including Albert Philippot, Jacqueline Folie, Régine Guislain-Wittermann, Nicole Goetghebeur, Louis Loose, Léopold Kockaert, Joseph Vynckier, Roger H. Marijnissen and René Sneyers. In 1993, a partnership was established between the Koninklijke Musea voor Schone Kunsten van België | Musées royaux des Beaux-Arts de Belgique (KMSKB-MRBAB) (the late Eliane de Wilde, Helena Bussers and Françoise Popelier Roberts-Jones), the KIK-IRPA (Liliane Masschelein) and the University of Liège (Dominique Allart) to continue the technical examination of paintings by Pieter Bruegel the Elder in the KMSKB-MRBAB collections. Later on, Christina Currie took on a preponderant role in this campaign with her doctoral research at the KIK-IRPA into the copies by Pieter Brueghel the Younger under the tutorship of Dominique Allart. Her dissertation, entitled *Technical Study of Paintings by Pieter Brueghel the Younger in Belgian Public Collections* (2003, University of Liège), represented the first large-scale study linking the technical aspects of works by Pieter Bruegel the Elder with those of Pieter Brueghel the Younger. The 2001-2002 *Brueghel Enterprises* exhibition provided a forum for sharing with the public and the scholarly community the first results of research on the subject. It nonetheless left several unanswered questions and raised new

ones, both regarding the technique of Pieter Bruegel the Elder and the copying procedures of his elder son. The research carried out since then tackles these issues head on and in doing so lifts a corner of the veil on the intriguing Bruegel-Brueghel phenomenon that continues to fascinate art lovers to this day. We invite the reader to discover our exciting new findings over the course of the following pages.

Notes

- 1 This exhibition was subsequently prolonged in the Museo Civico Ala Ponzone in Cremona, under the title *Breughel - Brueghel, Tradizione e Progresso: Una Famiglia di Pittori Fiaminghi tra Cinque e Seicento* (September-December 1998).
- 2 In certain cases, a painting could not be unframed for examination owing to the fragile condition of the work or at the request of the owner.
- 3 Numerous KIK-IRPA photographers contributed to the documentation, namely Hilke Arijns, Jacques Declercq, Jean-Luc Elias, Thierry Rolland, Daniel Soumeryn and Jean-Louis Torsin. Christina Currie took the majority of smaller details.
- 4 In most cases, infrared reflectography was carried out by Christina Currie and Sophie De Potter (KIK-IRPA) with an Inframetrics Infracam SWIR (short-wave infrared) video camera. The Inframetrics camera has a solid-state platinum silicide detector consisting of a focal plane array (FPA) of 256 columns and 256 rows. It is capable of registering infrared wavelengths of up to 5 microns; an internal filter in the camera blocks wavelengths beyond 2.5 microns. In the case of Brueghel the Younger's paintings, the 1.5-1.73 micron narrow bandwidth filter was also invariably used, as well as a close-up lens optimized for examination in the 1.1-2.5 micron range (12 inch focal length). For most paintings, the images captured were 5.0 × 5.0 cm in size. The light source consisted of two halogen lamps mounted on articulated arms and attached to a rail system. Images were captured directly onto computer and assembled using 'Adobe Photoshop' software. The images were processed by Sophie De Potter.
- 5 Tracings were taken by Christina Currie. For this process, the painting was laid flat on the table and checked for flaking paint. If deemed safe, a sheet of PVC film was laid over the painting's surface and securely attached to the table with tape to prevent movement during tracing. The outlines of the forms were made with a fine-tipped black felt marker pen. Tracings of paintings of the same compositions were physically superposed in order to reach conclusions as to the likely use of cartoons, but for the purposes of illustrating this book they were photographed and digitally superposed, which had the advantage of allowing a different colour to be allocated to each layer.
- 6 Guido Van de Voorde (KIK-IRPA, emeritus) and Catherine Fondaire (KIK-IRPA) carried out X-radiography. Catherine Fondaire scanned the images with an Array Corporation 2905HD film laser scanner and assembled the images using Adobe Photoshop.
- 7 Sampling, preparation of cross-sections, and optical microscopy were done by Christina Currie. Additional sample preparation, ultraviolet fluorescence microscopy, SEM-EDX and MRS of cross-sections were carried out by Jana Sanyova and Steven Saverwyns at the KIK-IRPA.
- 8 LC-MS/MS by Wim Fremont and HPLC by Karijn Lamens at the KIK-IRPA.
- 9 XRF was carried out by Jana Sanyova, Leen Wouters and Steven Saverwyns at the KIK-IRPA and on location.
- 10 Except in three cases – the KMSKB-MRBAB version of the *Census at Bethlehem* by Pieter Brueghel the Younger, the *Winter Landscape with Bird Trap* by Pieter Bruegel the Elder, and the *Fall of Icarus* in the Van Buuren Museum – for which dendrochronology was carried out by Joseph Vynckier (KIK-IRPA, emeritus), all dendrochronological analyses and interpretations were undertaken by Pascale Fraiture (KIK-IRPA); see her contribution in Volume III, Appendix V.



Case Study 2

The *Sermon of St John the Baptist* (Budapest, Szépművészeti Múzeum)

The *Sermon of St John the Baptist*, from the collection of the Szépművészeti Múzeum in Budapest, was painted in 1566. It is signed and dated ‘BRVEGEL·/·M·D·LXVI·’ (fig. 54).¹ The first impression is of a tight-knit throng of colourfully dressed figures, snugly ensconced in a wooded dell beside a river that leads the eye to the distant vista beyond. As in the *Census at Bethlehem*, which was probably painted at around the same time, a closer reading reveals biblical and contemporary political references.

The painting depicts a socially diverse crowd in a clearing in a wood, gathered around a modestly attired figure delivering a speech. Although the dress is contemporary and the scene northern European, this is clearly a reference to the preaching of John the Baptist. His right hand points upwards whilst his left designates the Saviour, Jesus, a figure in blue robes to the right. An allusion to John’s baptism of Christ is manifest in the tiny figures at the river’s edge, signalled by a barely distinguishable ray of light pointing downwards from the sky. Bruegel’s contemporaries would no doubt have made the link between John’s early sermons and the numerous Protestant reformist meetings taking place clandestinely in the countryside around Antwerp at that time.

The present study provides a detailed account of the painting’s techniques.² At the same time, it explores the question of whether the Budapest version was indeed the original composition, as asserted by Susan Urbach.³ The earliest source to refer to a painting by Bruegel on this subject is the estate inventory (1633-1650) of Archduchess Isabella Clara Eugenia, Governor of the Netherlands.⁴ This mentions *een predicatie van St Jan, van den Ouden Breughel* (a preaching of St John, by the elder Breughel). However, the measurements cited are not the same as those of the Budapest painting.⁵ This discrepancy, plus two key differences between the Budapest version and the copies by Bruegel’s sons – the colour of the gypsy woman’s cape in the centre foreground and a marked difference in height – raises the intriguing possibility that Bruegel the Elder painted two versions of the composition.⁶ A potential third version is alluded to by the Antwerp art connoisseur Peeter Stevens (c.1590-1668), who annotated his copy of Van Mander’s *Schilder-Boeck* (Rome, Biblioteca Hertziana) with the remark that he had seen a *Sermon of St John the Baptist* by Bruegel the Elder.⁷

Provenance

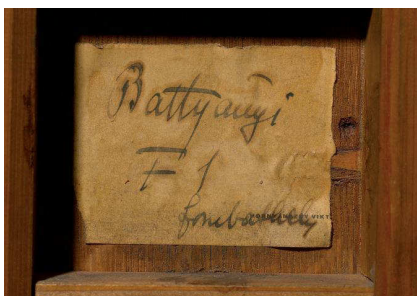
The early provenance of the Budapest painting is subject to speculation. Most likely exhibited in Hungary’s 1896 Millenary Exhibition, after emerging from the ancient Castle of the Batthyányi counts in Németsújvár (known today as

Fig. 52 Pieter Bruegel the Elder, *Sermon of St John the Baptist*, panel, 95.1-95.2 x 161.6-161.7 cm, signed and dated 1566, Budapest, Szépművészeti Múzeum

Güssing, Austria), the work is first securely documented as part of an exhibition of art from private Hungarian castles and collections in Szombathely in 1912.⁸ It was loaned from the collection of Count Iván Batthyányi, which was housed in his palace in Nagycsákány.⁹ An old label on the reverse of the painting, probably related to this exhibition, states in black ink handwriting ‘Battyányi/.F1./ Szombathely’ (fig. 53), with the printed words ‘HORNVANSZKY VIKT ...’ in the lower right. It entered the collection of the Szépművészeti Múzeum in 1951.

In 1956, Michael Auner claimed – albeit without supplying documentary evidence – that the Budapest version was already in Hungary in 1569–1570 as part of the private collection of the Hungarian Batthyányi family.¹⁰ Susan Urbach’s identification of the burgher whose palm is being read as the Flemish botanist Rembert Dodoens is based on the idea of a friendship between the latter and Count Batthyányi, but this remains speculative, since Auner’s assertion has never been proven.¹¹ Urbach herself remains cautious in her attempt to understand the iconography of the painting in the light of possible connections with Boldizsár Batthyányi. According to Dóra Bobory, who examined the correspondence of Batthyányi within the framework of her extensive study on this fascinating personality,¹² there is no reference in any of his letters (or in those written to him) to Bruegel or to a painting representing the Sermon of John the Baptist. Despite her thorough search of the archives, Bobory found no data relating to this issue.¹³ In her view it is not possible to determine when and how the painting ended up in Hungary. It is not inconceivable that it arrived long after Boldizsár Batthyányi’s time.¹⁴

Another possible provenance is that the painting formed part of Archduchess Isabella’s collection: the *predicatie van St Jan* mentioned in the inventory of her estate at the Coudenberg palace in Brussels.¹⁵ It is not known when she acquired the painting. As previously mentioned, the stated measurements of the painting in this document do not correspond to the current dimensions of the Budapest version. The former are given as 4 7/11 feet high by 7 2/11 feet wide, equivalent to 127.8 × 198 centimetres, as opposed to the Budapest version’s measurements of 95.1–95.2 × 161.6–161.7 centimetres.¹⁶ Supposing the inventoried painting’s measurements included a frame, there would still appear to be a discrepancy. If the current dimensions of the Budapest panel were adjusted to take into account the probable missing centimetre to the left and the likely three missing millimetres at the top, the original panel would have measured approximately 95.5 centimetres in height by 162.7 centimetres in width (see below). Subtracting a centimetre from each of the four sides to account for a rebate edge – the part of the panel hidden behind the frame – the original sight-size of the painting would have been approximately 93.5 × 160.7 centimetres. If the height and width of the Budapest panel were subtracted from the dimensions of the inventoried work, then the frame would have had to be abnormally wide for that period. Moreover, it would have been approximately 4 centimetres larger in width than height (web 52). In cabinet pictures showing private *kunstkamers* (art collections), frames in the late sixteenth and early seventeenth centuries are depicted with members of the same width on all four sides. Either the inventory compiler made a



53

Fig. 53 Label on the reverse of the panel

mistake, or the inventoried and Budapest paintings of St John the Baptist are not one and the same.

This could mean that the painting in the Archduchess's inventory represents a separate work by Bruegel the Elder on the same theme. The inventoried painting might also have been a version by Jan Brueghel the Elder or Pieter Brueghel the Younger. The fidelity of the sons' known copies to Bruegel the Elder's composition is indeed such that a compiler could have confused the two. It should also be remembered that by 1608 Jan Brueghel was serving as court painter to Archdukes Albert and Isabella.

As already mentioned, we have to take into account another reference to a *Sermon of St John the Baptist* by Pieter Bruegel the Elder in the annotations inserted by the famous Antwerp art collector, Peeter Stevens, into his own copy of Van Mander's *Schilder-Boeck* (Rome, Biblioteca Hertziana). At an undetermined date between 1625 and 1668, Stevens wrote in the margin of Van Mander's biography of Bruegel that he saw this painting together with several others by Pieter Bruegel the Elder. Unfortunately, he gave no indication about its location, measurements or any other specification.¹⁷ Stevens's note could refer to the painting now in Budapest, or to a second or even third version, if we consider the hypothesis that the Archduchess Isabella's version was autograph. This would not be particularly surprising. There are two extant versions of the Tower of Babel by Bruegel, and two or three (if we accept the attribution of the KMSKB-MRBAB version) of the Adoration of the Magi, each with different formats and layouts; many more repeats of the same subjects are mentioned in the sources.¹⁸

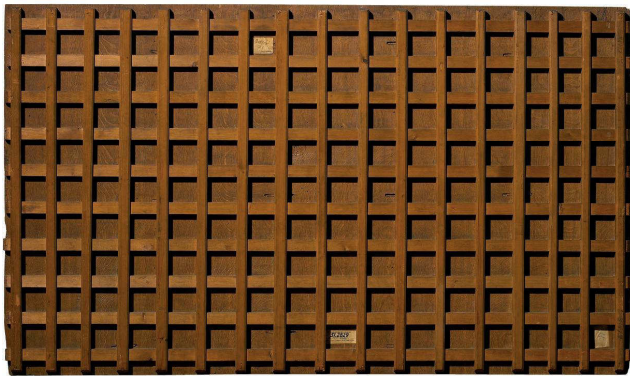
Inscriptions

The painting of the inscription 'BRVEGEL' in the lower right corner appears to have been guided by two horizontal placement lines incised into the wet paint (fig. 54, web 53).¹⁹ Partially discernible guidelines are also visible for the date. Painted dots at mid-height enclose and punctuate the inscription. In the *Conversion of Saul*, executed the following year (1567), ruled placement lines also appear above and below the painted inscription. In this painting, Bruegel adopted a similar calligraphic style, including the use of painted dot separators (fig. 101).²⁰

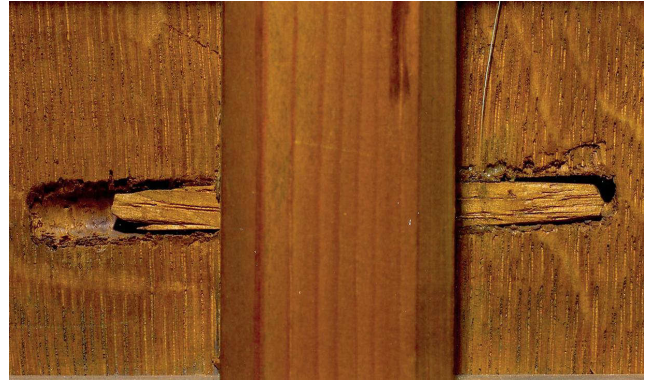


Fig. 54 Inscription and unprepared wooden border, lower right corner

54



55a



55b

Painting Support

Format and Construction

The panel, measuring 95.1-95.2 × 161.6-161.7 centimetres, consists of six vertically aligned oak planks (figs. 55a, 58, web 54). The boards appear to be radial cuts and wooden dowels bridge every join (fig. 55b), as in the *Census at Bethlehem*. There were originally three dowels per join. Any suggestion that the support might have been cut down from a larger panel is not supported by the position of the dowels, none of which lies particularly close to the upper or lower edges.

The unusually wide format is uncommon in Bruegel's landscapes. There is no obvious explanation; perhaps the original patron had a frame or particular space in mind when he ordered the painting. Another anomaly is the vertical orientation of the boards. This is unlikely to be related to a problem in the supply of sufficiently long oak planks of quality at the time of manufacture, as the width – just under six feet – was fairly normal at that period.

Barbes and Unprepared Borders

It has been suggested that the Budapest panel must have been significantly reduced in height since its completion to explain why the sons' copies all have a significantly greater – and arguably more harmonious – zone of sky. Susan Urbach already countered this assumption, citing the presence of an unpainted wooden border and part of a *barbe* along the top of Bruegel the Elder's version.²¹ Each of the four edges was carefully re-examined during the study.

As in the *Census at Bethlehem*, there are pronounced *barbes* and unprepared wooden borders at right angles to the wood grain, all along the lower edge of the panel and most of the way along the top (fig. 54, web 55). This border measures approximately 1 centimetre in width all along the bottom; along the top, it has been considerably trimmed, leaving no unpainted wood at the extreme left and approximately two thirds of its former width at the extreme right. This uneven reduction of the unpainted border could have been done at any time after the completion of the painting. There are also traces of a rough *barbe* and a narrow, unprepared and unpainted border all along the right side of the panel (fig. 56). To the left, these features are absent; the left edge – not

Fig. 55 a reverse of the panel
b wooden dowel, sliced in half and exposed during the later cradling of the panel

at all straight – has clearly been tampered with. A thicker mass of material at one place to the extreme left could be the remains of a *barbe*, which would imply that about a centimetre of panel is missing from this zone and slightly more from the remainder of the edge.

The evidence of the *barbes* and unprepared borders suggests the former presence of battens on all four sides or a temporary frame, applied to the panel prior to priming, to prevent warping during painting. There may have been a little ground applied already, as there are traces of squashed ground layer in some parts of the unprepared border; this would have helped to adhere the temporary battens. In all areas the *barbe* is slightly crushed, perhaps as a result of a hasty application of the final frame.

Curiously, traces of what appears to be original paint are also visible in places along the remaining part of the unprepared wooden border at the top. This paint may have been brushed on after removal of the temporary frame or battens, towards the end of the painting process.²² Dark paint – possibly original – also spills over onto the unpainted borders of the lower and right edges in places, again raising the possibility that a batten or temporary frame was taken off towards the end of the painting process.

From the point of view of the painted composition, it is worth noting that the pilgrim woman's pink skirt is cramped uncomfortably against the extreme left edge of the panel. In most of Pieter Brueghel the Younger's versions of the composition there is a dark space and a tree to the left of the pilgrim woman, serving as a framing device for both the figure and the composition as a whole. However, in Jan Brueghel's two known versions²³ (a small-scale version on copper and a large-scale version on wood) the pilgrim woman is also painted right up to the edge of the support; in the larger version there is also an unprepared and unpainted border along the left, proving that the composition is intact in this area. Since Jan's composition closely reflects the Budapest version in many other ways – even more so than his brother's – this increases the likelihood of a loss of only 1–1.5 centimetres from the left side of Bruegel the Elder's panel, mostly comprising an unpainted border.

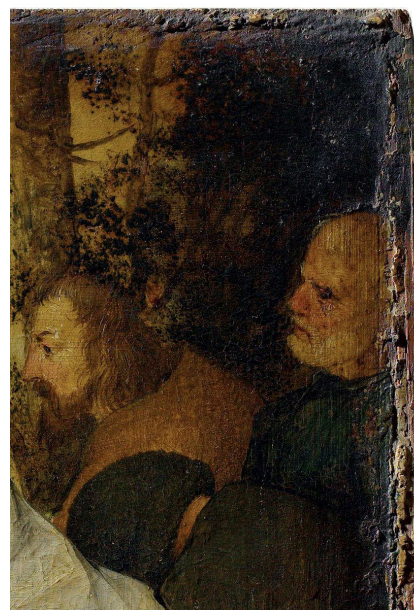
The presence of partial unprepared borders and *barbes* along the top edge supports Urbach's assertion: the painting has not been cut down. Uneven trimming of the borders on the top and left sides is the only later intervention observed on the panel, aside from cradling. The unusually elongated horizontal format of Bruegel the Elder's version may have been intentional, perhaps to fit a particular space in the patron's property.

Condition

The panel's current thickness of only approximately 0.6 centimetres results from later planing of the reverse, most likely carried out to level the surface prior to cradling. The planing process also exposed the dowels between the joins, some of which are now missing from their holes.

The wooden cradle, a recent addition, consists of seventeen fixed vertical members attached to the reverse, and ten moveable horizontal ones.

The panel support is in a stable condition, despite several small splits at the edges of cradle members and minor areas of woodworm.



56

Fig. 56 Unprepared wooden borders

Preparatory Layers



57

The panel is prepared with a white chalk ground. This was confirmed through SEM-EDX of a single cross-section from the edge of the original paint layer in the lower left corner, carried out by Steven Saverwyns at the KIK-IRPA (fig. 58).²⁴

An opaque, light-toned *imprimatura* completely covers the ground and is clearly visible through the thin paint. The wide, textured brushstrokes are multi-directional, although mainly horizontal (fig. 57, web 56). Analysis of the layer in the cross-section established that it mainly consists of lead white, with a little chalk and fine black particles; a large orange particle was also identified as red lead using MRS.²⁵ The medium was not analysed.

Although the *imprimatura* does not appear to have been left unpainted in places to serve as areas of light tonality, as in the *Census at Bethlehem*, it retains an influence on the appearance of the final paint layer.²⁶ As with the preceding generation of Flemish artists, for example Hieronymus Bosch, Bruegel's thin, semi-transparent paint layers fully exploit the effects of luminosity made possible by a light underlying priming.

Underdrawing

Form and Function

For some unknown technical reason,²⁷ the underdrawing in the *Sermon of St John the Baptist* is much clearer in infrared than that in the *Census at Bethlehem*, revealing in greater detail Bruegel's personal touch (fig. 58, web 57: infrared reflectogram). As in the latter painting, the underdrawing was applied after the *imprimatura*. The artist drew in the main figures and landscape motifs carefully, indicating landscape contours more loosely. He sometimes used hatching and scribbled infill for tone.²⁸ Again, black chalk is the most likely medium, based on visual appearance (fig. 59, web 58).²⁹ The drawing lines skip over the broad brushwork of the *imprimatura*, marking only the ridges; the seemingly dotted line is therefore not due to pouncing dots, as might be thought at first glance.

In lighter zones and in places where the paint has lost its covering power, the drawing is visible to the naked eye; elsewhere, it is only legible in infrared. The width of the lines varies little, although there are differences in density resulting from changes in the pressure with which the chalk or other medium was handled and/or natural variations in the hardness of the drawing material.

As in the *Census at Bethlehem*, foreground motifs are clearly and precisely outlined, as if following a pre-established plan, for example the intricate folds of the skirt of the pilgrim woman in the lower left, the precisely laid out costumes of the gypsy family and the outlines of the tall figures in the lower right (figs. 59-60). This did not preclude small adjustments along the way, such as the juxtaposition of the sleeves of two male figures behind the gypsy man. Likewise, forms occasionally overlap at the drawing stage and the choice as to which one is given prominence was made during painting, as in the face of one woman and the bonnet of her neighbour in the crowd (web 59). In the upper right corner the figures are underdrawn with delicate but slightly awkward

Fig. 57 Figure in the centre left, showing vigorous brushwork from the underlying *imprimatura*



58

outlines with no artistic flourish at all, suggesting that Bruegel could have been following now-invisible guides of some kind (fig. 64).

When dealing with smaller motifs or those in the background, Bruegel adopted a fairly summary style of drawing. In faces, one rapid line often denotes the profile, with a brief indication for the nose. Tiny dashes and scant outlines suggest eyes, mouths and beards. In garments, folds are indicated but embroidered details are not. The figure of Jesus, with his arms crossed, is minimally outlined (fig. 61).

The small but key figure of John the Baptist was given more attention than most during drawing, except the face, which is cursorily sketched (web 60). The artist carefully established the outlines of the cloth, indicating the underside of the sleeve with curved hatching (fig. 62). The most striking feature though, pointed out by Urbach, is the Baptist's 'unnaturally long forefinger, the *digito monstrans* ... , the characteristic and traditional attribute of the Precursor'.³⁰ This involved an adaptation of the perspective of the arm during drawing. The motif was later reduced during painting to an evocative gesture.

The gypsy's dog is drawn in a looser, sketchier manner than the figures and underwent minor revisions during drawing (figs. 60, 78). The dog may have been a late addition at the drawing stage, as his outlines cross over those of the folds of the gypsy's garment.

In the immediate foreground, squiggly and diagonal lines denote shadows cast by figures. The landscape background is largely laid out in the drawing, although it is sometimes difficult to distinguish in the infrared image.

Fig. 58 Infrared reflectogram, revealing the vertical alignment of the planks of the oak support

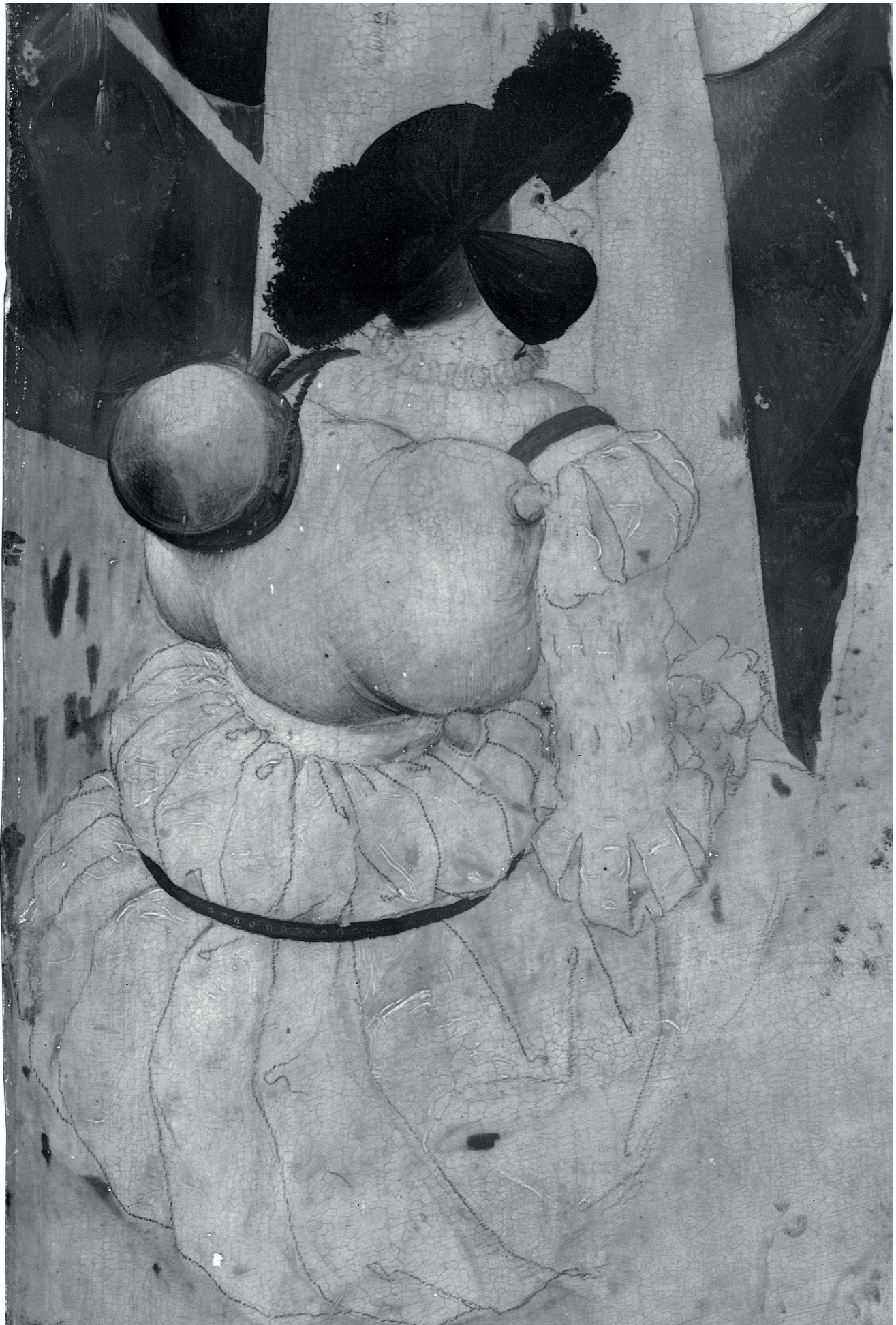
Following pages:

Fig. 59 Pilgrim woman, with meticulous outline drawing for folds
a IRR
b normal light

Fig. 60 Gypsy family and 'Oriental', IRR

Fig. 61 Boy clinging to a tree and Jesus with folded arms, with loose underdrawn hatching for bushes
a IRR
b normal light

Fig. 62 St John; upward-pointing finger reduced in size during painting
a IRR
b normal light

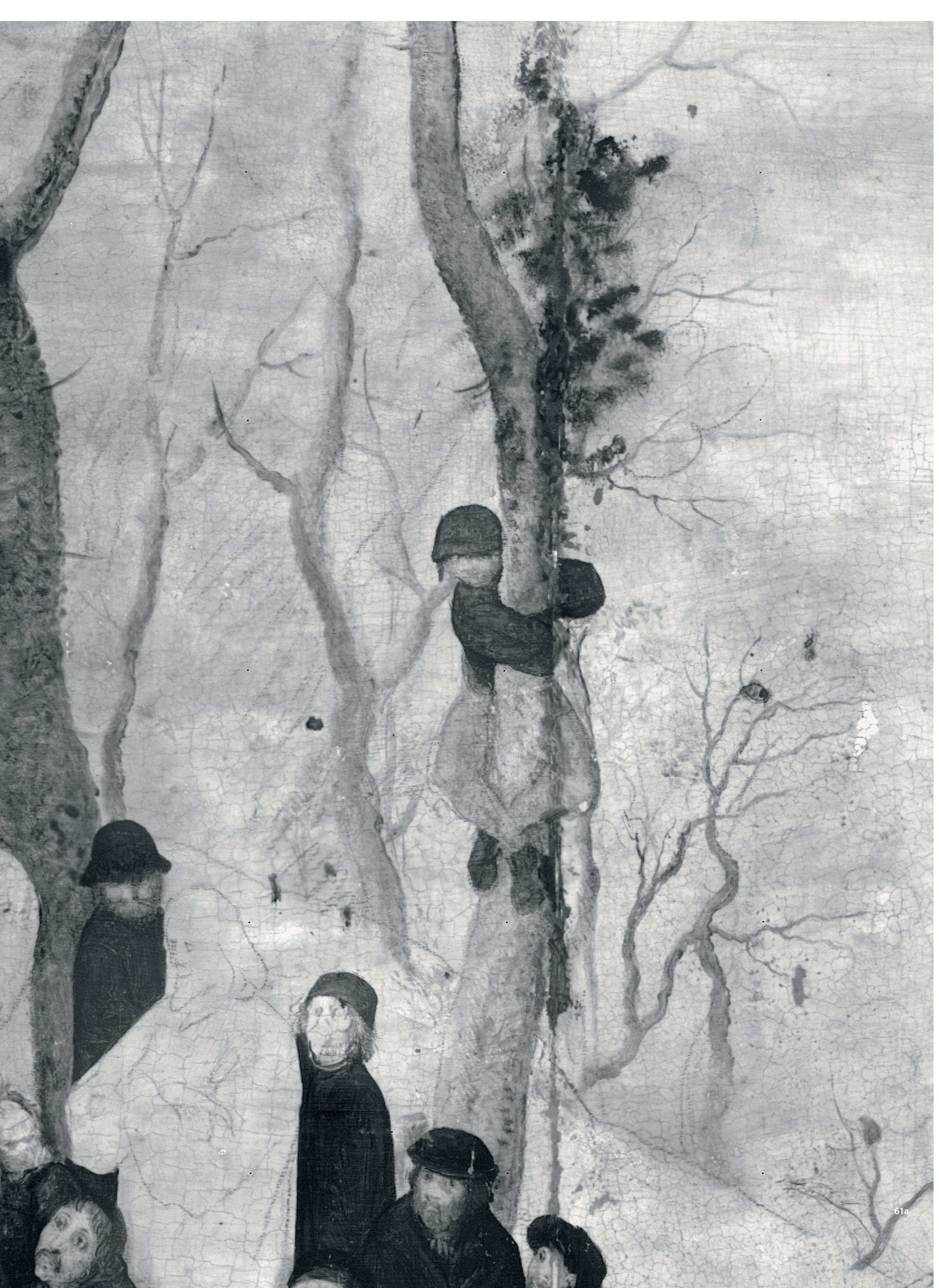




The Sermon of St. John the Baptist by Bruegel the Elder















63a



63b

Fig. 63 Landscape vista; spindly tree cutting vertically across the landscape dropped in paint layer
 a IRR
 b normal light

Fig. 64 Figure group in the upper right with straight-forward outline drawing
 a IRR
 b normal light



64a



64b



Cloud-like notations mark tops of trees and faint outlines follow the borders of the river and most of the horizon (fig. 63). Broad, diagonal hatching establishes dark vegetation to the left of the distant landscape vista (fig. 61). Large, cloud-like, sometimes looping squiggles locate the bush near the right edge of the panel. Simple outlines mark the left profile of the large tree trunk to the right of the vista and two small trees on the far right. Freehand drawing lines mark the church on the horizon, as well as a long, spindly tree trunk cutting straight through the centre of the landscape vista, later dropped during painting (fig. 63, web 61).

The Role of the Underdrawing in the Creative Process

As with all Bruegel's painted compositions, there are no surviving preparatory drawings for the *Sermon of St John the Baptist*. The fact that the composition is underdrawn with exceptionally few adjustments points to Bruegel having made a compositional drawing prior to working on the panel, as surmised for the *Census at Bethlehem*. The unhesitating and assured outlines of the main motifs suggest that these were worked out in particular detail in prior studies and were then transferred by means of a cartoon or cartoons of important motifs. The underdrawing style of the larger-scale figures – freehand, but constant, crisp, with no hatching or sketchiness – would not be incompatible with the use of cartoons, as Susan Urbach has already suggested.³¹ The small-scale figures at the back of the crowd, which are sketchier in outline and in some cases even unfinished, may have been additions during the drawing process.

As with the *Census at Bethlehem*, the underdrawing provided the necessary bridge between the working-out of the composition on an independent sheet or sheets and further refinement of the image during painting. This is not to say that Bruegel abandoned all creativity during underdrawing; indeed, the drawing is lively and even spontaneous and searching in certain zones, suggesting that the artist could not help but adjust and improve his composition as he drew.

Paint Layer

Condition

With the exception of small, local losses concealed by discoloured retouching the paint layer is in excellent condition. The vitality and immediacy of the original colours remain intact, despite some specific alterations over time, discussed below. Red glazes retain a richness and intensity of hue.

Palette

The painting's wide colour and tonal range spans from sombre grey tones for the main crowd's clothing to warm, rich juxtapositions of colours for more prominent figures. Throughout the crowd, bright headwear in yellow, red, orange, and white, together with the luminous faces, lends a vibrant, tapestry-like effect. The landscape vista, painted in cool greens and blues, gives the illusion of the far distance and provides a complete contrast to the warmth of the fore- and middle grounds.

The current appearance of the painting, although unaffected by cleaning damage, appears to have suffered at least one fundamental colour change. This

Fig. 65 Gypsy woman; the grey hue of her cloak is probably due to the fading of smalt





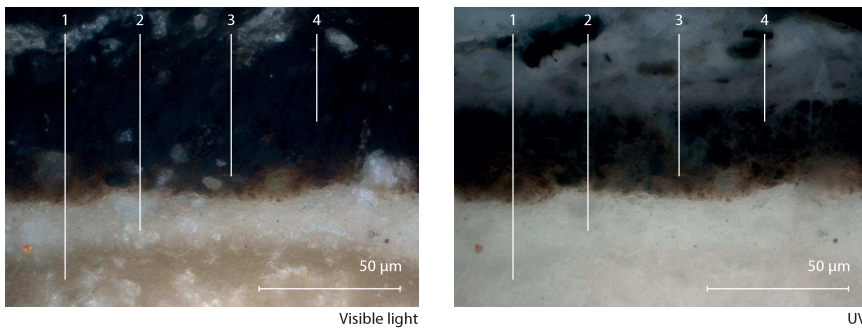


Fig. 69 Cross-section from dark paint in the lower left corner

- 3-4. dark layers (azurite, lead white, earth)
- 2. *imprimatura* (lead white, chalk, carbon black, one red lead particle)
- 1. ground (chalk)

discolouration to grey. Here, the semi-transparent, thickly applied paint was positively identified as smalt using XRF analysis; its physical resemblance to the faded paint in the *Sermon of the St John the Baptist* supports the hypothesis of the presence of smalt in the latter (web. 65).³⁷ Furthermore, the faded zones in Brueghel the Younger's *Battle between Carnival and Lent* correspond to grey or blue areas in Bruegel's original version in the Kunsthistorisches Museum in Vienna.

A rich, brown glaze forms the main colour of the sleeveless outer garment of the Turk on the far left, as well as that of the fur-collared coat of a man at the back of the crowd (figs. 66, 68).

Pigment Analysis

Owing to the excellent condition of the paint layer and the presence of varnish, only one sample was taken for analysis (fig. 69). In this cross-section, from the vegetation on the edge of the painting in the lower left corner, analyses of particles in the two paint layers above the *imprimatura* identified azurite and lead white; another point analysis detected iron, aluminium, silicon and magnesium, suggesting the presence of an earth pigment.³⁸

Sequence of Painting

As in the *Census at Bethlehem*, Bruegel consciously juxtaposed rather than overlapped planes of colour, leaving 'reserves' for the motifs to come.³⁹ As well as ensuring that each zone dried efficiently, this technique allowed light to be reflected back through the thin paint and *imprimatura* from the underlying ground. In the *Sermon of St John the Baptist*, the integrity of each zone of paint was so well respected that it is hard to work out which colour was applied first; none the less, tiny overlaps here and there do prove that the composition was painted more or less systematically from background to foreground, starting with the sky and background landscape and working downwards to the foreground figures. Even some relatively minor forms, such as the strap of the pilgrim's bag, are reserved in the paint over which they are silhouetted (fig. 58).⁴¹ An exception to this 'rule' is seen in a pair of figures set against the river; although they were foreseen in the underdrawing, their heads appear to be painted directly on top of the background paint, rather than reserved in it (fig. 74).

From a starting point in the sky, Bruegel reserved spaces for the figures' heads and all but the narrowest tree trunks (fig. 64); next, he painted the main trees and background foliage, leaving reserves for figures, including the boys climbing trees (fig. 70). He most probably painted the landscape vista, with its

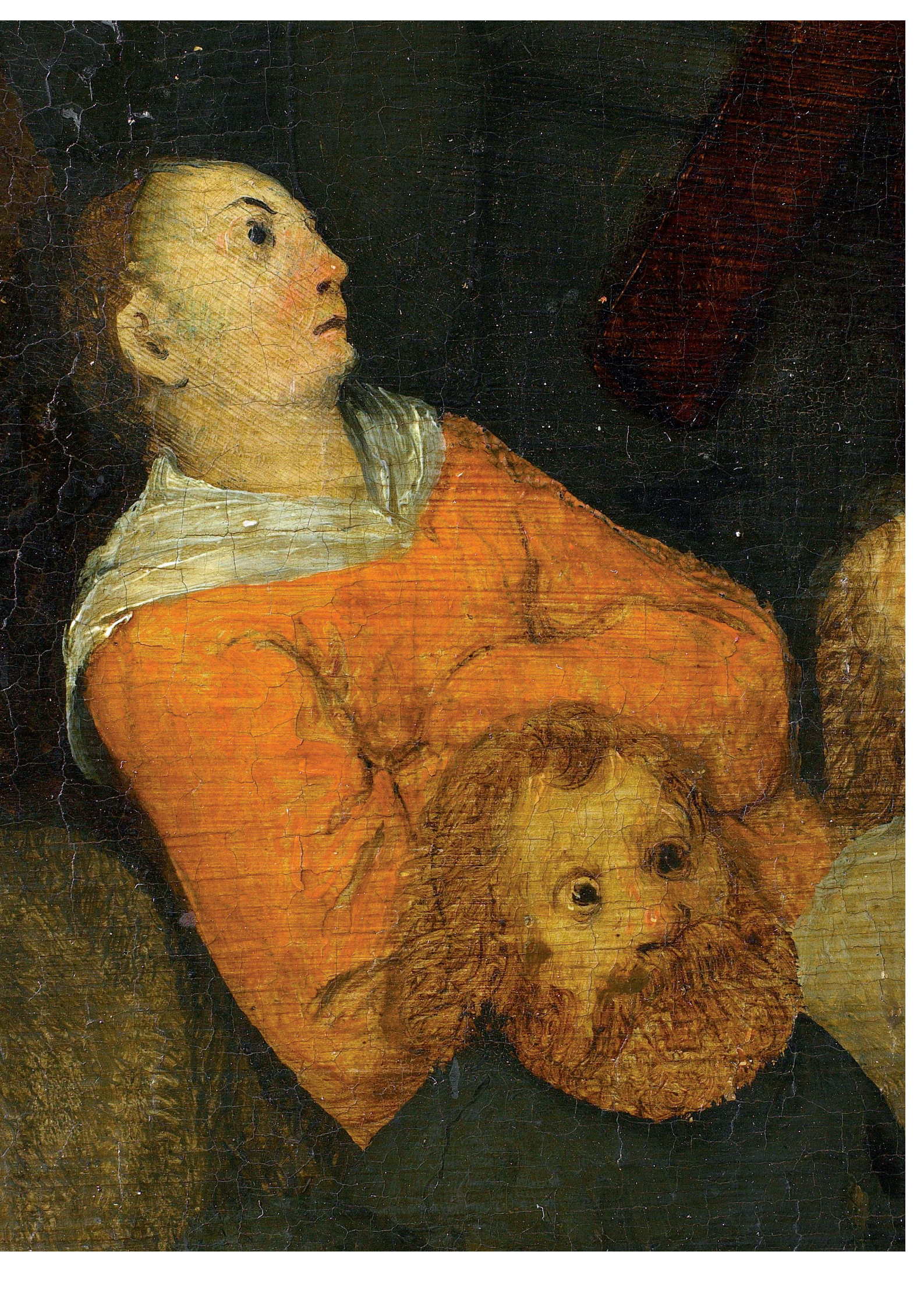


70a



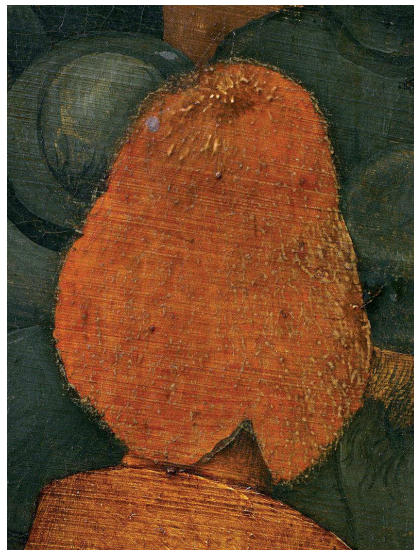
70b

Fig. 70 Boy clinging to a tree, his place reserved in the paint of the tree trunk and shifted up slightly during painting
a IRR
b normal light





72a



72b

mountains, curving river and fortress, at around the same time or just before the trees, although he may have added finer details, such as the Baptism, at a later point. While painting the landscape, he reserved a space in the bluish paint of the smaller buildings for a narrow tree (web 66). He waited for the sky paint to dry before adding minor trees in transparent light brown and green.

Working downwards through the composition, the artist reserved spaces for the top row of heads in the background foliage and trees; after painting in the heads, he applied their clothing, as revealed by one of the figures, whose grey tunic overlaps his beard slightly (fig. 68, web 67).

In the body of the crowd, several motifs illustrate the progression from background to foreground. The yellow paint of straw hats of a group of women slightly spills over the subfusc clothing of the figures behind (web 68); likewise, the orange shirt of a man leaning against a tree overlaps the coats of figures above. In turn, the beard and grey garment of the figure below overlap the orange shirt a little (fig. 71). A final example is John the Baptist himself, where overlapping planes of colour reveal that his proper left arm was painted after the grey robe just above, but before the darker part just below (fig. 62, web 69).

In the foreground, Bruegel adopted the same approach. For example, for the head of the youth wearing a red hat to the left of the 'Oriental',⁴¹ he reserved a space in the grey coat of the figure behind, making some modifications versus the underdrawing (web 70). Similarly, a small figure in the lower left of the composition is painted in a reserve, but his nose overlaps onto the surrounding paint (web 62d). The pumpkin-shaped turban of the Turk is applied into a reserve in the paint layer of the figures above it (fig. 81, web 71), while the brownish-red, domed headgear of the figure above the gypsy boy is also clearly painted in a reserved space in the dark grey hat and garments of the figures behind (fig. 72, web 72). A final example is the face of the enigmatic burgher, which is painted in a reserve in the dress of the woman behind, spilling slightly over it; the burgher's hands were painted prior to the black paint of his garment (fig. 60, web 73).

In the immediate foreground, the surroundings appear to have been painted before the figures, as would be logically expected. A small change of mind proves that Bruegel painted the grass prior to the gypsy woman's light coloured

Fig. 71 Figures in the crowd, with no overlapping of adjacent paint layers

Fig. 72 Place for headgear reserved in the surrounding paint
a IRR
b normal light



73

cloak; in the lower right edge of the cloak, the grass paint extends up to the cloak's underdrawn outline; however, the drapery was subsequently painted with a more rounded profile, leaving a small gap (fig. 65).

In some areas, Bruegel painted details within a motif, and then carefully turned around them with the surrounding colour, for example the tassel and lower part of the cap of the standing figure in the lower right (web 74). Likewise, the thick, cream-coloured paint of a gypsy hat has been neatly brushed around the thinly painted fingers of the Turk (fig. 66).

The shell-decorated hat of the pilgrim in the lower left and the domed head-covering to its immediate right provide an example of the precise juxtaposition of two motifs without overlapping; close examination suggests that the more textured paint of the reddish hat was applied after the thinner brown paint of the pilgrim's headgear (fig. 73).

Long, thin motifs such as straps and swords are either reserved in the surrounding paint or simply painted over it, as in the Oriental's sword, in which drying cracks in the black paint reveal the slashed yellow textile beneath (fig. 80). The complex brushwork technique of the figure's slashed costume probably explains why Bruegel avoided interrupting it with a reserve for the sword.

Final touches include the Baptism scene, where tiny dabs of brightly coloured paint suggest the sun shining on the figures' clothing (fig. 74), and the white sail of the small boat, through which the riverbank and buildings can be made out.

Brushwork and Handling

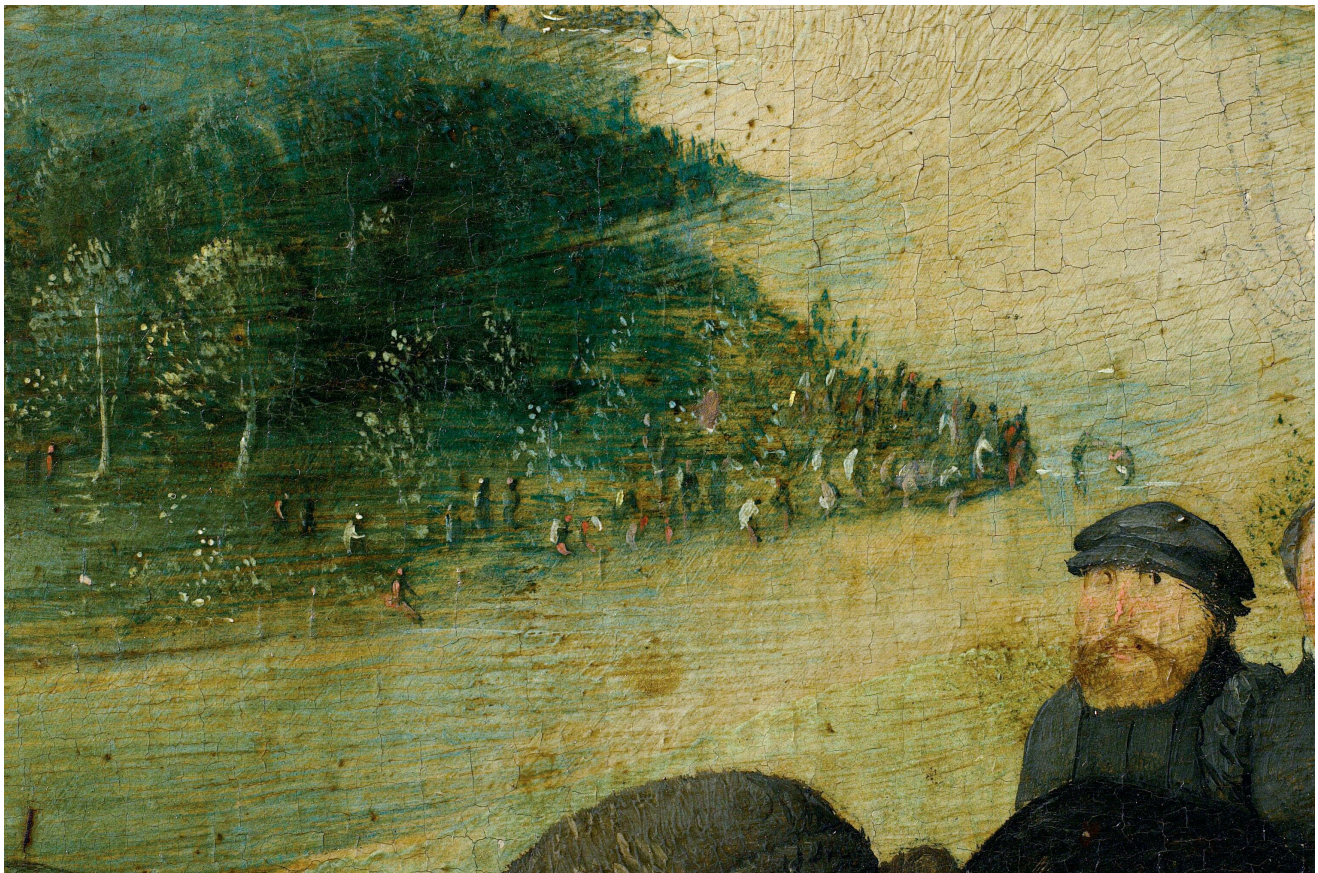
For the most part, Bruegel worked with extremely thin paint, making much of the light toned *imprimatura* in areas of flesh. In faces, which were probably completed in one session, his usual procedure was to 'sketch' in the main features in transparent light or dark brown paint, and then apply sparing highlights in pink, orange-red or white. He used a hint of red glaze to mark upper lips, and black or dark red lines to suggest eyes and nostrils. He gave vibrancy

Fig. 73 Pilgrim's cap and reddish hat to the right, juxtaposed without overlapping

to larger-scale faces, such as that of the Turkish or Polish soldier (fig. 75), with transparent brown hatching.⁴² In other areas of flesh, such as the proper left arm of John the Baptist, hatching strokes establish shadows (fig. 62). Jesus's hair, face and beard are sketched in with little more than transparent brown and reddish-brown paint (fig. 76). Through the judicious juxtaposition of translucent flesh with dull grey, beige and opaque black clothing, Bruegel heightened the perceived effect of luminosity.

Bruegel modelled the draperies quickly in one or two sessions, varying texture and brushstroke. He often painted darker fabrics using fine, short strokes, allowing the underlayer to show through in the mid-tones and highlights. He employed red transparent paint to mark shadows in red fabrics and the spaces between fingers. He modelled Jesus's light blue robe in one session using dark blue semi-transparent paint for folds and pale blue paint for highlights, his lively brushwork marking the direction of the contours (fig. 76). He thickly applied a blue-green paint – probably azurite – for blue robes (web 75). He painted St John's simple tunic in brown, adding variety through deft brushwork and allowing the light underlayer to play a role (fig. 62). In the pinkish-red skirt of the pilgrim woman on the far left, he modelled the folds in one session, working wet-in-wet and reserving enough physical space between paint strokes to reveal the light underlayer, the latter providing a neutral, unifying tone (fig. 79).

Fig. 74 Baptism at the water's edge



74



75

Fig. 75 Soldier's face modelled with short hatching strokes

Fig. 76 Jesus's face and hair painted in one session and features 'sketched' in using translucent brushwork

The artist manipulated translucent paint to great effect. For example, a deep red glaze indicates the peak of a turban (fig. 81, web 71); a similar glaze, together with pink highlights, are all that make up a woman's dress (fig. 62, web 76); a red glaze over the *imprimatura* and a vermilion layer complete the costume of the Turkish soldier leaning against the tree to the left (web 77). Other colours also appear to have been applied in pure pigments, such as thickly applied, dark green, semi-transparent paint for a large hat (web 78).

Unusual textures characterize several head coverings: a domed hat is composed of a rich reddish glaze, possibly browner in colour than originally, over thicker, light toned, opaque paint (fig. 72); a blue, woolly cap is painted with short, dabby movements of the brush, or perhaps using some form of textile to blot the thick paint (fig. 68). The latter resembles a similar cap in the *Census at Bethlehem*, although in the latter, the artist must have worked a pointed stick into the soft paint to make swirls (see above, web 45).



The Sermon of St. John the Baptist by Bruegel the Elder

The slashed yellow hose of the Oriental is a good example of the way in which Bruegel's handling of paint physically imitates the actual texture represented. He painted the yellow cloth fairly thickly, 'slashing' the still-soft paint with a fine brush loaded with either sienna-coloured paint or no paint at all (fig. 80); once hardened, he applied dashes of red onto the empty slashes in the yellow paint; likewise, for the cuffs of the sleeves, he marked openings in the light fabric with dark grey paint applied wet-in-wet, followed by red dashes. For the more discreet dashes and vertical lines of the jerkin, he painted on sienna-coloured strokes wet-in-wet into the darker yellow body colour. For the puffed white sleeves, he applied short red dashes in a square pattern over dry, light grey paint.

Other garments display embroidery and patterns achieved with a variety of tools. For the gypsy boy's richly decorated wrap, the artist used short, delicate brushstrokes to paint small motifs in various colours over a dry, dull grey base coat (web 79). For the inscription running along the hem of the pale blue robe worn by a tall figure in the lower right, he applied a coloured glaze onto the dry, light blue body colour, and while it was still soft, incised the letters with a blunt-ended tool, perhaps the wooden end of a paintbrush (web 80). For the gypsy man's cape, he adopted a similar technique to create an embroidered

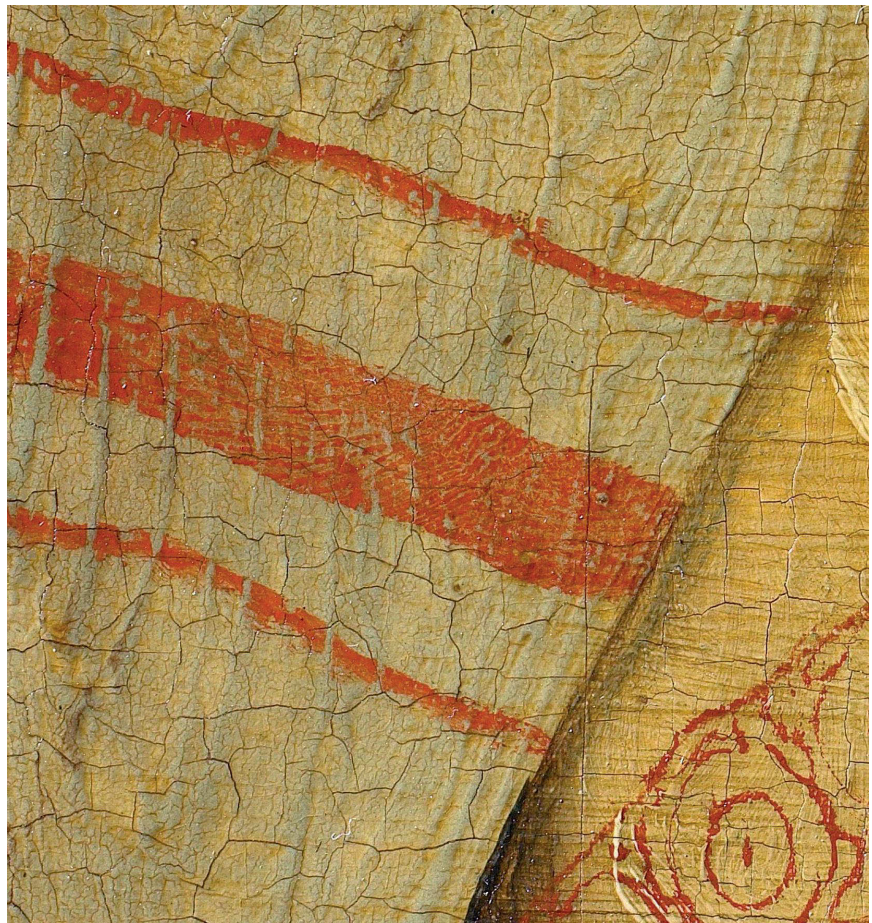


Fig. 77 Gypsy woman's cape, with the red stripe softened by a fingerprint

Fig. 78 Embroidered pattern in gypsy's cloak made by drawing a blunt point through soft paint

Following pages:

Fig. 79 Rich brushwork in the pilgrim woman's dress

Fig. 80 Wet-in-wet and wet-on-dry painterly effects in the flamboyant attire of the Oriental







design in the pattern of translucent stripes (fig. 78). He used his fingers to break up the thicker red stripes in the gypsy woman's robe, while the paint was still soft (fig. 77).⁴³ Similarly, he employed a woven textile to blot the thick, rich brown paint of both the Turk's robe and a coat with fur collar in the crowd (figs. 66, 68); this softened the transition between the brown apparel and the surrounding paint, and removed excess material.⁴⁵

Bruegel painted large tree trunks using dark outlines and brown and black semi-transparent glazes, allowing the *imprimatura* to act as the mid-tone. He imitated foliage using thin, dark green, transparent paint, sometimes dabbing it on with the spread hairs of a brush. Likewise, he created grass patterns; on green and brown transparent zones of paint and lines of varying thickness, he applied touches of opaque, mid-green paint (web 81). He also used dark glazes to tone down background zones near the edges of the painting, no doubt to concentrate attention on the figural composition.

Gesture and Expression

As is often the case in Bruegel's work, facial expressions are typically enigmatic and lacking in individuality; none the less, as in the *Census at Bethlehem*, the figures' stances and hand gestures reveal a wide range of social interaction and behaviour. Many of the crowd are listening intently to the preaching while others are absorbed in their own thoughts and activities.

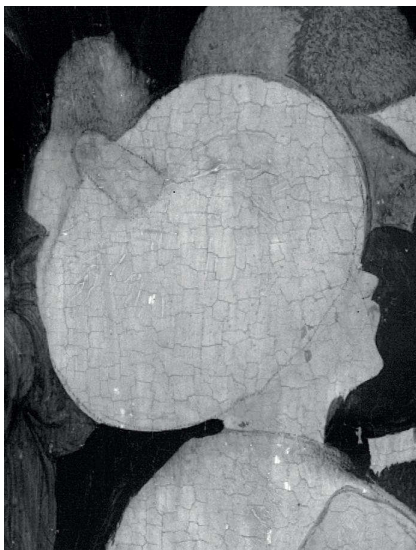
John the Baptist's sermon is in full flow. With his left hand he gestures eloquently to the inconspicuous figure of Christ. The gypsy and his burgher client in the foreground, engaged in an act of palm reading, are oblivious to the sermon. On the other hand, the stance and pointing finger of the blue-clad figure in converse with the friar in the lower right suggest a serious discussion of the speech being delivered. In the crowd, the folded arms or clasped hands of several figures indicate intense concentration on the spiritual message while others look elsewhere, distracted by the press of people. As Joseph Gregory points out, a fashionably dressed burger in the crowd in the centre right 'holds his nose in the presence of the great, unwashed masses' (fig. 63).⁴⁵

The flamboyantly-trousered soldier leaning against the tree on the left more or less fixes his gaze towards the viewer, interrupting the closed circle of the assembled congregation and inviting us in to explore and consider the events depicted (fig. 75).

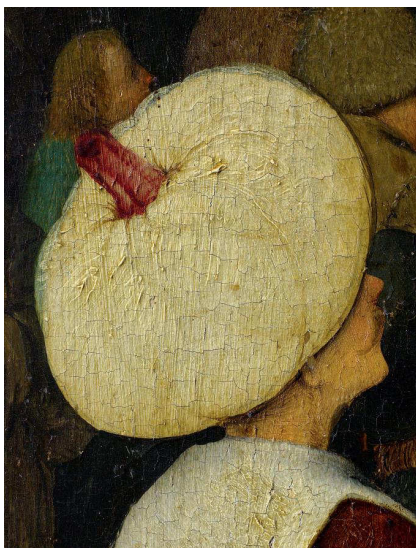
Modifications during Painting

Although Bruegel generally adhered to his underdrawn design, he adjusted or added features that impact on the interpretation of the scene. There are also signs that he consciously sought to improve the delicate balance of form in the composition as he painted.

In all likelihood the enigmatic figure of the burgher having his palm read by a gypsy never featured in the underdrawing, as Susan Urbach has also observed (web 73).⁴⁶ Although the face and right hand of this figure are clearly reserved in the background paint, they show no traces of underdrawing, unlike the hands and faces of every other foreground figure. Two diagonal drawing lines that occur in the hand area but are unrelated to it might indicate the opening of the burgher's black cloak, or may be related to the dress of the



81a



81b

Fig. 81 Place for headgear reserved in the surrounding paint
a IRR
b normal light

woman behind. Unfortunately, the absorbency of the dark cloak in infrared prevents an assessment of the underdrawing in this area. The gypsy's hands are also late additions; his right hand is painted directly on top of the grey paint of the garment of the figure behind, and his left hand has curved vertical drawing lines running through it, most likely a continuation of the edge of the grey robe. The black paint of the burgher's robe, one of the last paint layers to be applied, turns around the fingers of the right hand of the gypsy.

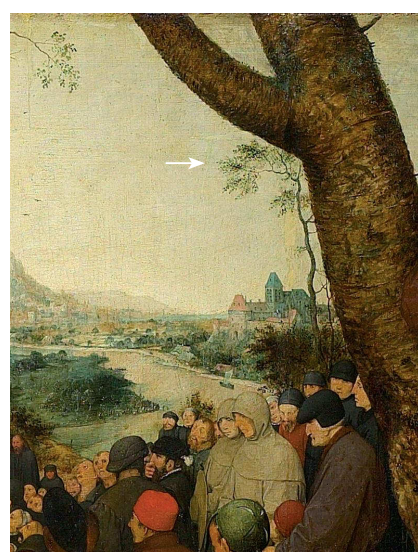
Given the artist's tendency to paint from top to bottom, the position of the burgher near the lower centre of the painting makes it technically feasible that the figure was added at a late stage in the painting process, around the time Bruegel painted the woman's black cloak.

Whether intentional or not, the relationship of the gypsy and the burgher is highly enigmatic. Bruegel's likely original design – without the burgher – would have been more straightforward, with the gypsy casting his gaze at his wife and child and thus underscoring their family unit (web 82). The unrelated underdrawing lines in the hands may even indicate an intended fatherly gesture. Perhaps he was touching his young son's head or shoulder? The burgher figure may well represent a contemporary portrait, added during the course of painting at the behest of the patron.⁴⁷ The fact that the burgher is suppressed in certain copies would support the idea of his identification as the original patron.

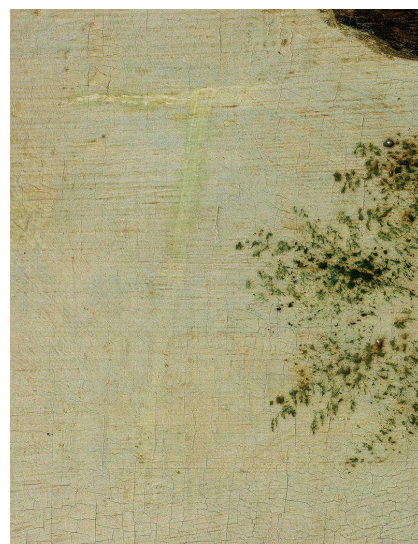
In terms of iconography, Bruegel made several small revisions and additions. Notable among these is the exaggerated forefinger of John the Baptist, attenuated in the paint layer (fig. 62). He also added a small white streak high in the sky, pointing to the distant Baptism at the water's edge (fig. 82).⁴⁸ This 'ray of light' surely represents the Holy Spirit, as described in Matthew 3:16: 'And then Jesus had been baptized, just as he came up from the water, suddenly the heavens were opened to him and he saw the Spirit of God descending like a dove and alighting on him.' In a personal interpretation of his father's composition by Jan Brueghel there is a clearly recognisable white dove in the sky above the water.⁴⁹ In Bruegel's the Elder's *Conversion of Saul*, painted a year after the present *Sermon of St John the Baptist*, an oblique, narrow shaft of light emanating from the sky again suggests divine intervention. As in the *Sermon*, both the subject – in that case Saul – and the heavenly rays seamlessly integrate into what might initially appear to be a purely secular scene.

During painting, Bruegel changed the position of a male face in the centre left of the crowd to face St John, rather than looking out towards the viewer, perhaps to balance the number of figures actively listening to the sermon with the number of inattentive or preoccupied attendees (fig. 83). This motif may have iconographical significance. Urbach suggests the pair might represent John the Evangelist supporting the fainting Virgin, or another apostle, although these figures would not normally appear in a composition depicting John the Baptist's sermon.⁵⁰

Meaningful details, probably planned from the start, but not appearing in the underdrawing, include a small red embroidered cross on the robe of the standing figure in the lower right.⁵¹ There is also a dark handprint on the brown cloak of a figure in the centre of the crowd, first noted by Adolf



82a

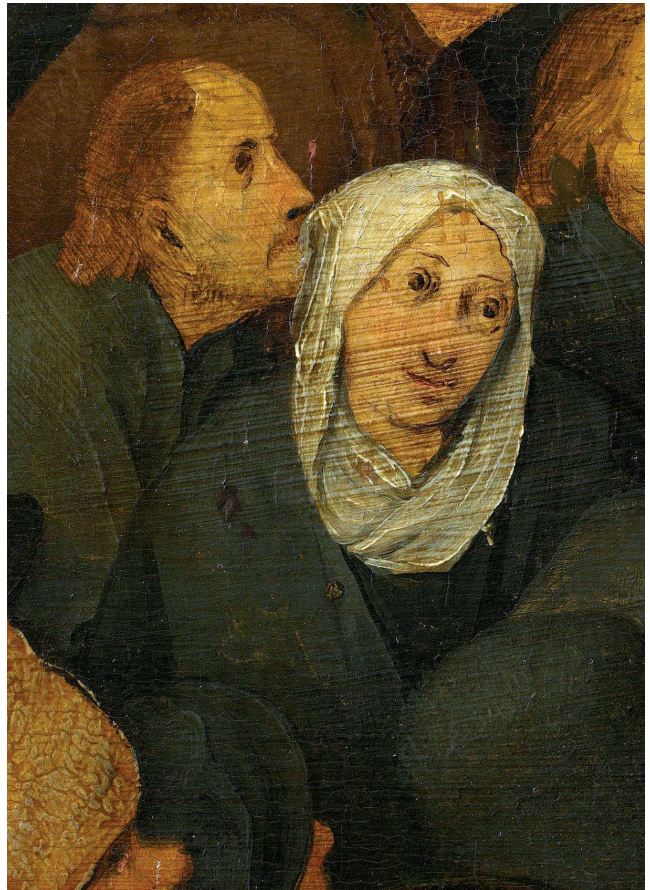


82b

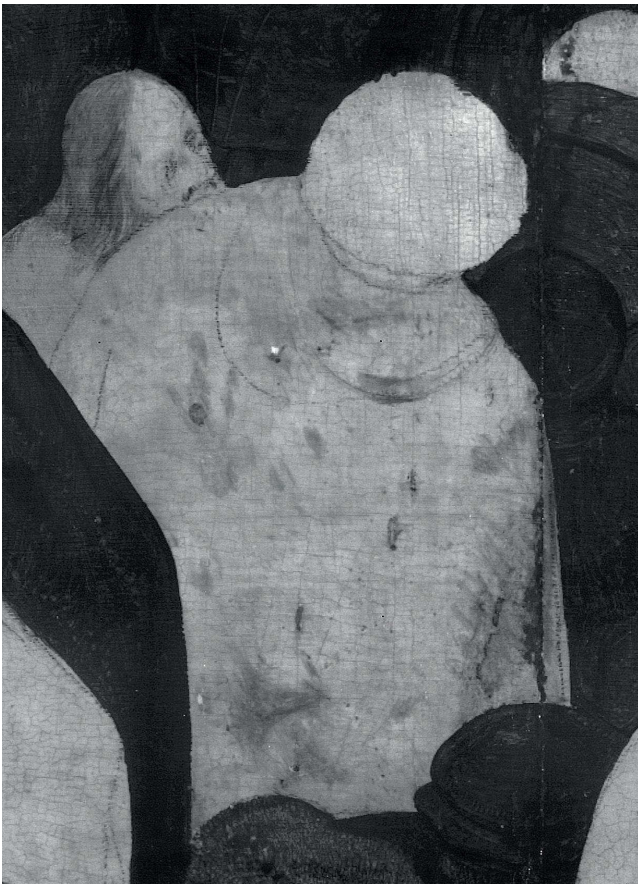
Fig. 82 White cross in the sky pointing to the Baptism
a detail with cross indicated
b cross



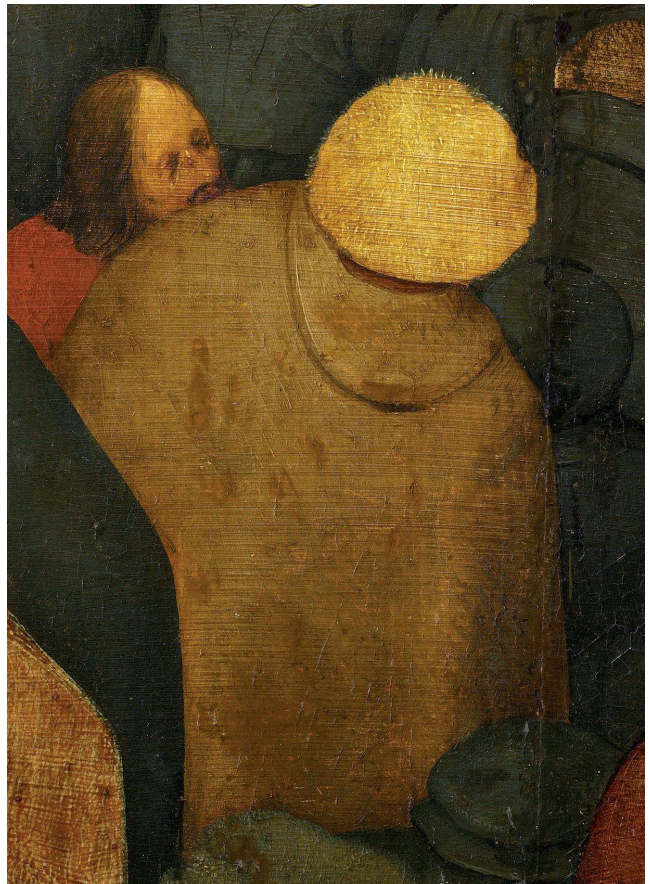
83a



83b



84a



84b

There is a functional, freehand underdrawing applied on top of a thin lead white *imprimatura*. The drawing shows few changes or reworkings during application, suggesting that the artist previously made a cartoon of the composition or a *modello* drawing and cartoons of important motifs. The study of the underdrawing in relation to the paint layer reveals the addition of several motifs and the abandonment of others, however, as well as various improvements to outline. Notable among the additions is that of the fashionable burger having his palm read, probably a contemporary portrait. At least one iconographical marker was altered – the elongated finger of John the Baptist – while others were added, such as the ray of light pointing towards the Baptism taking place at the river's edge. This shows that the composition evolved significantly during the course of execution, supporting its claim as the first, original version.

The artist's disciplined manner of applying paint, working from background to foreground and leaving reserves for the motifs to follow, is typical of Pieter Bruegel the Elder and recalls the technique observed in the *Census at Bethlehem*. The carefully modulated palette, thin paint layers, unusual textures and often virtuoso brushwork is entirely characteristic; the colour scheme, however, was most likely enriched at its outset by several additional zones of blue, now completely faded, most notably the cloak of the gypsy wife in the centre foreground. This would explain the discrepancy in colour between the Budapest version and the sons' copies.

The unusually elongated horizontal format remains unexplained; the sons' copies, with their increased sky and forest background, offer a more 'balanced' composition. The most likely scenario is that Bruegel painted a second or even third version of the composition – as suggested by the Archduchess Isabella's inventory and Pieter Stevens's notes – in a format reflected in the many copies.

Notes

1 *Sermon of St John the Baptist*, 95.1-95.2 × 161.6-161.7 cm, signed and dated in the lower right corner, Budapest, Szépművészeti Múzeum, inv. 51.2829. The painting entered the collection of the Szépművészeti Múzeum in 1951. For a discussion of the provenance of the painting, see URBACH 2004. For a bibliography, see PIGLER 1967 and URBACH 2000. All major Bruegel specialists attribute the painting without question to Bruegel the Elder (see chart of opinions regarding authenticity of

paintings attributed to Bruegel in ROBERTS-JONES 1997, pp. 326-327). The only dissenting voice is Klaus Ertz, who concedes there is no proof for his instinctive feelings (CAT. ESSEN-VIENNA-ANTWERP 1997, no. 6; ERTZ 1998-2000, p. 359).

2 We are indebted to Ildiko Ember, Head of the Department of Painting at the Szépművészeti Múzeum, who allowed us to examine the painting at length. Christina Currie presented several of the present observations at the College Art

Association's 94th annual conference in Boston, USA, in February 2006: C. Currie, 'Reproducing Bruegel: Pieter Bruegel the Elder's *Sermon of St John the Baptist*, 1566 and the copies by Pieter Brueghel the Younger (1564-1637/8)'.³

3 URBACH 1999, URBACH 2004. Susan Urbach's accounts concentrate on the painting's technique, iconography and rediscovery at the beginning of the last century, as well as treating the issue of its relationship to the versions by Bruegel's sons. We thank Susan Urbach for sharing

Case Study 1

Copies of the *Battle between Carnival and Lent* after Pieter Bruegel the Elder

Among the most important acquisitions by the KMSKB-MRBAB in Brussels in recent years is a version of the *Battle between Carnival and Lent* by Pieter Bruegel the Younger (henceforth the KMSKB-MRBAB version).¹ The painting is one of only five known copies of Bruegel the Elder's great masterpiece, which is signed and dated 1559 and is now in the Kunsthistorisches Museum in Vienna (figs. 176-177).² Although unsigned, the KMSKB-MRBAB version ranks comfortably alongside Bruegel the Younger's most exquisite productions. Particularly striking is its exceptionally close correspondence to the original in motif and colour.

The *Battle between Carnival and Lent* depicts a series of ceremonies and customs associated with 'Mardi Gras' or Shrove Tuesday, the pre-Lenten Carnival festival still celebrated in towns such as Binche in Wallonia, with some allusions to Ash Wednesday and Palm Sunday. The jousting figures personifying 'Carnival' and 'Lent' are surrounded by a variety of rituals, processions and individual cameos, contrasting jovial feasting and merrymaking with poverty, sickness and religious charity. As in Bruegel the Elder's *Children's Games* (1559), the composition offers a tipped-up view of the townscape, allowing motifs to be portrayed without overlapping.

Of the four other known versions by Bruegel the Younger, the copy formerly in the Muzeum Narodowe w Krakowie (henceforth the Cracow version) was lost in the Second World War and the other three are in private hands. None of these three was examined for the present study although photographs were scrutinized for comparative purposes. One was auctioned at Christie's New York in 1989 (Christie's New York version);³ another by Christie's London in 2011 (Christie's London version);⁴ and the last known version, from the former Portland collection (Portland version), was sold by Christie's London in 2010 (figs. 192-194).⁵ There are no copies of the composition by other artists although there are numerous versions offering a more simplified interpretation of the subject, reducing it to the central characters of 'Carnival' and 'Lent' and a few other figures. Ertz lists twelve versions of this small-format variant, for which the original model is unknown, but assigns only one to the hand of Bruegel the Younger.⁶

During infrared examination of the KMSKB-MRBAB version, a decisive discovery provided indisputable visual proof for Bruegel the Younger's image transfer technique. Intriguingly, this same evidence also gave clues as to the intimate relationship among the copies of the *Battle between Carnival and Lent* and a hidden link with the original version.⁷

Fig. 176 Pieter Bruegel the Younger, *Battle between Carnival and Lent*, panel, 121.4 x 171.9 cm, unsigned, Brussels, KMSKB-MRBAB

Fig. 177 Pieter Bruegel the Elder, *Battle between Carnival and Lent*, panel, 118.0 x 164.5 cm, signed and dated 1559, Vienna, Kunsthistorisches Museum

Inscriptions

On close inspection, no signature could be found on the KMSKB-MRBAB version. Of the other copies, only the lost Cracow example is documented as signed. However, as pointed out by Klaus Ertz, this signature is unlikely to be authentic, given the spelling of the name as 'P. Breugel', an inscription used neither by Brueghel the Younger nor by his father.⁸

Painting Supports

The KMSKB-MRBAB version is painted on an oak panel, as are two of the other extant copies. The Cracow version was also on oak. The Christie's London version is on canvas.

Format and Panel Construction

The KMSKB-MRBAB panel measures 121.1-121.4 × 171.3-171.9 centimetres. As with the other copies, this is the same format as Brueghel the Elder's original (118 × 164.5 cm), albeit slightly larger by a few centimetres.

The panel is constructed of five horizontally aligned planks. The third and fourth planks from the top are radial cuts while the others are semi-radial.⁹ The panel has undergone planing and cradling during a former restoration (web 127).¹⁰ The planed-down reverse reveals an empty dowel hole at the join between the second and third planks from the top, showing that the joins were originally held together with wooden dowels. The X-ray reveals that there were three dowels per join, most of which are still present (web 128). Unfortunately, planing has obliterated any possible signs of original tool marks or branding.

The bottom plank has a knot in the wood, visible on the right of the reverse, implying a careless choice of board by the panel-maker.

Provenance of the Wood and Dating

Dendrochronological analysis of the KMSKB-MRBAB version by Pascale Fraiture (KIK-IRPA) revealed that the oak making up the support originated in the Baltic region.¹¹ Fraiture also discovered that all the planks came from the same tree, and that this tree was also the source of the wood for two planks of an unsigned version of the *Procession to Calvary* by Brueghel the Younger (Antwerp, KMSKA, inv. 31).¹²

In terms of dating, the youngest identified tree ring dates from 1589, thereby giving 1598 as the *terminus post quem* for the felling of the tree that provided the planks for the panel, and the same *terminus post quem* – 1598 – for panel manufacture and execution of the painting.¹³

Barbes and Unprepared Lateral Borders

In the KMSKB-MRBAB panel, the ground and paint layers extend to the top and bottom edges but stop approximately 1 centimetre from the sides, culminating in a *barbe* of thicker ground and exposed wood on the borders (fig. 178, web 129). These unprepared edges are matched on the reverse by deep rebates.

Ungrounded and unpainted lateral borders also feature in the Christie's New York and Portland versions. In the Portland panel, corresponding rebates are clearly present on the reverse (web 130). The lateral edges of these panels

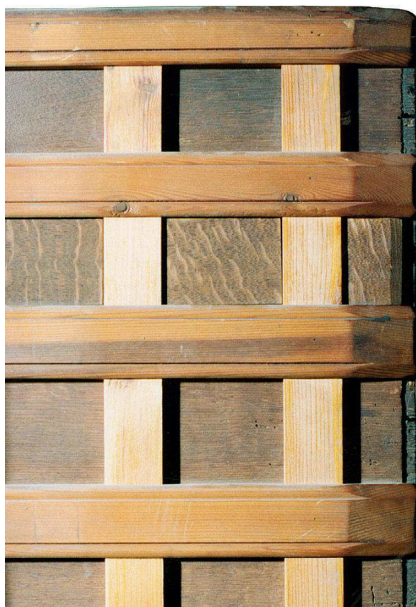


Fig. 178 *Barbe* and unpainted lateral border with corresponding rebate on the reverse, KMSKB-MRBAB version

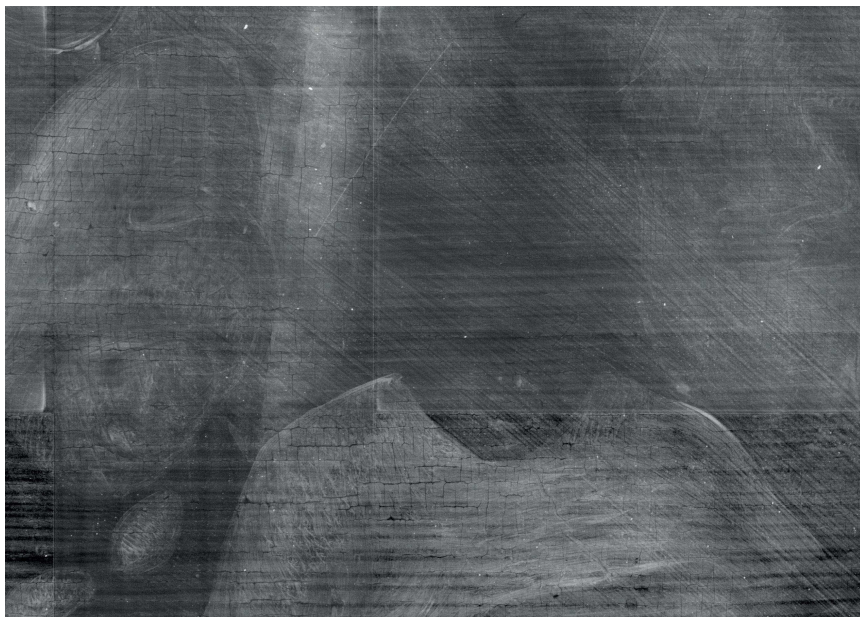
may originally have housed grooved wooden battens known as ‘channel edge supports’, which were intended to prevent warping during painting, as suggested for several of Bruegel the Elder’s large-format paintings.¹⁴

Preparatory Layers

The KMSKB-MRBAB painting is primed with a white ground. Above this is a lead white-containing *imprimatura*, applied in wide brushstrokes in various directions and traversing the whole surface (fig. 179). The *imprimatura* is more



179



180

Fig. 179 Visible brushstrokes from the underlying *imprimatura* layer, KMSKB-MRBAB version

Fig. 180 Detail from the X-ray showing brushstrokes of the *imprimatura*, KMSKB-MRBAB version

obvious in the X-ray, where broad sweeping brush marks unrelated to compositional forms are discernible over the entire composition (fig. 180, web 131).

The *imprimatura* is only occasionally visible in infrared, suggesting that there is little if any carbon-based pigment in the layer. At the edges of certain colours and through faded blues, it appears beige. This tint may well be due to the presence of earth pigment(s) in the layer (invisible in infrared), or possibly to the yellowing of the oil medium in the layer itself or in the overlying paint. The visual effect of the slightly yellowed varnish layer may also play a role in the appearance of the *imprimatura*.¹⁵

Transfer of the Design to the Prepared Panel Surface: Evidence for the Use of Pricked Cartoons

In old-master paintings underdrawings are not always applied freehand. The use of a pricked cartoon to facilitate the transfer of a pre-established composition to a painting support by rubbing a coloured material through perforated lines was a common technique, as attested in diverse sources.¹⁶ Normally, the powdery dots would have been wiped away once they were joined up with a more permanent drawing material. This would explain why it is relatively rare to detect traces of pouncing in the form of dotted lines in an underdrawing. Nevertheless, in the case of the KMSKB-MRBAB *Battle between Carnival and Lent*, just these kinds of dots appear in infrared. Not only are they spectacularly clear, they also show up in many parts of the painting.¹⁷ This discovery is exceptional, as it brings an irrefutable response to the crucial but hitherto unanswered question of design transfer in Brueghel the Younger's work.

A particularly distinct zone of pouncing is seen beneath the group of figures that includes the pot-bellied guitar player in the lower left (fig. 181). The rounded deposits of carbon-based pouncing dust register in infrared as soft-edged dots, varying in density but more or less even in size, with the intervals between pounce marks shifting randomly from 1 to 4 mm. The markings appear to be intentionally more closely spaced for finer details such as hands and more widely spaced for the figures' external outlines.¹⁸ In the case of the guitar player himself, pouncing can be made out for the general outlines, the creases underneath one of the arms, the folds in the clothing, and even the curled end of a fold.

Interestingly, in the shirt of the personification of 'Carnival' and following the contours of the barrel on which he is mounted, the pounce marks have been smeared, resulting in short dashes rather than dots (fig. 182). Most likely the cartoon was accidentally shifted during the pouncing process.

The use of a cartoon was not reserved for figure groups. Indeed, certain architectural motifs were also transferred with the aid of a perforated sheet, such as the stonework of the lower left corner of the church and the large columns inside. At the entrance to the same building, pouncing can be detected for the small pillow supporting the crucifix and for the figure of a monk. Pouncing is even present for the smallest of motifs, such as a child's spinning top near the church.

In some places only faint traces of pouncing marks remain while in others there are no discernible dots at all (fig. 183, web 132). The most significant zones to lack detectable pouncing are the upper centre and upper left, which include much of the architectural background. None the less, these areas are fully underdrawn, in keeping with the rest of the composition. A diagram shows that most of the visible pouncing is confined to the lower left and the upper centre-right, with a little in the lower right (web 133). There is no difference whatever in the underdrawing style or level of detail between the areas with and without pouncing, which suggests that pouncing may have been originally present over the whole composition.

The fact that the pouncing is still visible in some areas of the painting and not in others is puzzling from a technical point of view. A series of tests on practical reconstructions of Brueghel's supports and preparatory layers sought to discover what sorts of conditions could lead to permanent dots.¹⁹ These included pouncing while the *imprimatura* was still tacky. The ideal moment for transfer was difficult to gauge, i.e. when the layer was neither too wet nor too dry, but still tacky enough to fix the pouncing. In these tests, pouncing dots were still adhered to the surface after wiping and painting, although the markings varied in density and were sometimes sporadic. This suggests that the survival of the pouncing dots in certain areas in the KMSKB-MRBAB *Battle between Carnival and Lent* was not intentional, and probably due to a partially tacky *imprimatura*.²⁰ Indeed, under normal circumstances, the artist or one of his assistants would have been able to sweep away all the dark dots after underdrawing with an implement such as a pigeon wing or soft piece of bread. This would have avoided sullyng the subsequent paint layer with the black powder.²¹

A Series of Smaller Cartoons rather than a Whole Sheet

Although the other versions of the *Battle between Carnival and Lent* were not examined, tests of correspondence with the KMSKB-MRBAB version were carried out using Christina Currie's tracing of the latter and a scaled image of the Portland version. These showed that there is no correspondence of the composition as a whole, but that there are clear affiliations amongst certain groups of motifs, such as figures in the lower left, centre, lower right and background (web 134). This suggests that rather than one large cartoon, Brueghel's workshop used a set of smaller sheets. The overlays also show a clear lack of correspondence in the motif of the two dice players in the lower left corner; here, therefore, no cartoon can have been used. The common groupings – revealing the cartoon-transferred motifs – would have to be refined through further superpositions with other copies.

Underdrawing

Form and Function

Infrared reflectography reveals a detailed underdrawing for the entire composition of the KMSKB-MRBAB version, carried out in a dry, carbon-based drawing medium (web 132). The underdrawing appears to skip ridges of brushwork in certain areas, implying that the artist was drawing on top

Fig. 181 Group around the guitarist, with pouncing visible in infrared, KMSKB-MRBAB version
a IRR
b normal light

Fig. 182 The figure of 'Carnival', with pouncing visible in infrared, KMSKB-MRBAB version
a IRR
b normal light















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Solving a Famous Controversy: Two Versions of the *Fall of Icarus*

In 1912, during a period of renewed fascination with the art of Pieter Bruegel the Elder following Georges Hulin de Loo and René Van Bastelaer's seminal monograph (1907), the appearance of a canvas representing the *Fall of Icarus* in a style typical of the artist did not pass unnoticed (fig. 591). The Musée de Bruxelles (today the Koninklijke Musea voor Schone Kunsten van België | Musées royaux des Beaux-Arts de Belgique, KMSKB-MRBAB) immediately acquired the painting, then considered to be a copy after a lost work by Bruegel.¹⁴ It was thereafter cited in the great monographs that followed. Max. J. Friedländer considered it a Bruegel original, while Edouard Michel leaned in favour of a copy.

The discovery of a second, similar version in 1935 added fuel to the controversy. This painting, owned by the Parisian collector Jacques Herbrand, was smaller and painted on panel (fig. 592).¹⁵ The coexistence of the two paintings gave the debate a new twist. What was the connection between them? Could one be considered the original, and if so, which? The version in the KMSKB-MRBAB abruptly increased in prestige following a side-by-side comparison organized by Leo van Puyvelde, the museum's Chief Curator. In his view the

Fig. 591 After Pieter Bruegel the Elder, *Fall of Icarus*, 73.0 x 111.5 cm, canvas, Brussels, KMSKB-MRBAB



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KMSKB-MRBAB painting was more subtle in its conception, as Bruegel had avoided the anecdotal portrayal of Daedalus. In Ovid's account (*Metamorphoses*, Book VIII, 183-235) Daedalus created wings from birds' feathers held together with beeswax so that he and his son Icarus could fly to freedom from the tower in which Minos had imprisoned them. Despite his father's stricture not to fly too low or too high, Icarus soared too close to the sun, which softened the wax that held the wings together. And so he fell and vanished into the sea. The Herbrand version represents Daedalus in mid-flight as Icarus plunges into the waves. To Van Puyvelde, this literal illustration of the narrative was incompatible with Bruegel's creative genius. The KMSKB-MRBAB version was deemed to have benefited from 'poetic licence': Daedalus is not portrayed at all and the sun is not at its height but close to setting, bathing the whole scene in a dramatic ambiance. These deviations from a more straightforwardly narrative interpretation nourished the growing fascination of the KMSKB-MRBAB version. Certain observers remarked on the material condition of the painting, alluding to probable restorations, though it was a long time before any of them attempted to define the true nature of these or their effects. The mystery surrounding the canvas may even have been a significant factor in its attraction.¹⁶ In 1969 the

Fig. 592 After Pieter Bruegel the Elder, *Fall of Icarus*, 62.5 x 89.7 cm, panel, Brussels, Uccle, Van Buuren Museum

painting was sent for analysis to the KIK-IRPA, where its poor condition was highlighted,¹⁷ and again in 1973 at the request of Philippe Roberts-Jones, then Chief Curator of the KMSKB-MRBAB.¹⁸

The problems raised by the KMSKB-MRBAB version were openly discussed by Jacques Foucart, honorary Chief Curator of the Department of Paintings at the Louvre, in a review of the exhibition *Bruegel. Une dynastie de peintres* held in Brussels in 1980. His verdict was unambiguous: ‘This admirable Fall of Icarus, beautiful above all in reproduction ... is in fact a fairly weak and worn copy.’¹⁹ Subsequently, Dominique Allart voiced the same opinion in two publications, supported by new scientific imagery.²⁰

Though an attribution to Bruegel is called into doubt by most experts the work is still presented to the public as one of the masterpieces of the KMSKB-MRBAB. The copy on panel previously owned by Herbrand was acquired by the collector David van Buuren and is still in the Van Buuren house, now a museum, in Uccle on the outskirts of Brussels. Completely eclipsed by the KMSKB-MRBAB version, it has never recovered its prestige.

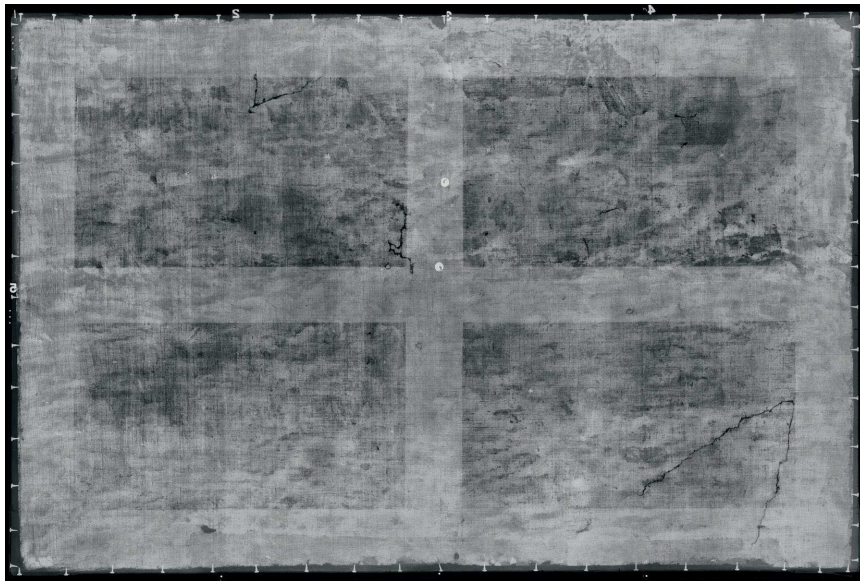
The Version in the Koninklijke Musea voor Schone Kunsten van België | Musées royaux des Beaux-Arts de Belgique

Provenance

The KMSKB-MRBAB holds the correspondence relating to the purchase of the work in 1912. This includes a letter from Hippolyte Fierens-Gevaert, then Secretary to the Board of the Brussels Royal Museums of Painting and Sculpture of Belgium, to Prosper Pouillet, Minister of Sciences and Arts, dated 24 June 1912. Fierens-Gevaert informed the minister that Alphonse Jules Wauters had been sent to London to examine a painting representing the Fall of Icarus, which was, he wrote, an ‘excellent copy of a lost work by Bruegel the Elder’. The work was then at the Sackville Gallery (28, Sackville Street, London W1). Wauters was accompanied by Georges Hulin de Loo, the great expert on Flemish painting and co-author with Van Bastelaer of the first monograph on Bruegel. The two men went ahead with the purchase of the painting. A letter from Max Rothschild, director of the Sackville Gallery, was sent to the museum together with the invoice for £100, dated 1 July 1912. It mentions ‘The Death of Icarus’, a piece ‘attributed to Breughel’ [*sic*]. A letter from Wauters dated 4 July 1912 also mentions the acquisition. Addressed to Fierens-Gevaert it states: ‘M. Hulin and I have bought, for the sum of 2500 fr, the copy after the Fall of Icarus by the elder Bruegel’.²¹ The history and whereabouts of the work prior to its sale in London in 1912 are unknown.

Support

From the start it is hard not to be struck by the difference in appearance between the celebrated painting in the KMSKB-MRBAB and the works by Pieter Bruegel the Elder studied in the present volumes. Up to a certain point this difference can be explained by the nature of the support: the KMSKB-MRBAB painting is on canvas (see reverse, web 695, and X-ray, fig. 593 and web 696). A canvas support is not in itself an anomaly in Bruegel’s œuvre. Two paintings



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on canvas signed by the artist have come down to us: *The Misanthrope* and *The Parable of the Blind*, both dated 1568 (Naples, Museo Nazionale di Capodimonte). Although they have not been analysed scientifically their visual appearance suggests that both are typical examples of the so-called *tüchlein* technique (tempera on a glue-sized canvas, but without a ground layer).²² A third, *The Wine of St Martin's Day*, with traces of a signature, was recently discovered in a Spanish private collection and acquired by the Museo Nacional del Prado: technical examination has also identified the work as a *tüchlein*.²³ Another *tüchlein* – an *Adoration of the Magi* in the KMSKB-MRBAB in Brussels – is attributed to Bruegel.²⁴ In addition to tempera, Bruegel also seems to have painted in oil on canvas, as suggested in a document of 1572 concerning the sale of the collection of Jean Noirot, Master of the Antwerp Mint, which explicitly describes a *Peasant Kermis* as being painted in oil on canvas.²⁵

The primary support of the KMSKB-MRBAB *Fall of Icarus* is made of linen or hemp and the fibres exhibit a 'Z' spin. It is woven in tabby weave with approximately 19.5 threads per centimetre in the vertical direction and approximately 15 threads horizontally. It is made of a single piece without visible seams or selvages.²⁶ The X-ray reveals the typical distortion of the fibres known as garlanding or cusping near the left, right and lower sides, caused by the uneven tension that resulted when the canvas was attached to the original strainer with nails. The upper part of the canvas may have been cut down a little during a former restoration, as there are no traces of cusping here. The upper right corner is clipped and the upper edge has a small piece missing at the centre. The turnover edges attaching the original canvas to its strainer are no longer present, and were most likely cut off during the first lining, following usual practice. The X-ray also shows losses and numerous large tears in several different zones in the original canvas. Certain tears can be made out with the naked eye on the surface of the painting, notably two with a 'V' shape, one in the sky area above the coastal town to the left, and the other, of a

Fig. 593 X-ray, KMSKB-MRBAB version

significant length (20-25 cm), in the lower right corner to the right of Icarus struggling in the waves.

There are two lining canvases. Crude attempts at tear-mending with the help of gauze are contemporary with the first lining. During that lining the reverse of the original canvas was spread with a radiopaque mixture, probably a glue containing lead white.²⁷ The gauze patches, which appear clearly on the X-ray in several areas, were also fixed in place using the same mixture. On the front the tears were filled with a radio-transparent material such as chalk or gesso. The turnover edges of the first lining have been removed and it is torn in places, which may explain the need for a second lining.²⁸ The second lining canvas, glued to the first, has the appearance of linen (web 695). It is stretched up on a modern pine stretcher and its turnover edges are glued onto the back of the stretcher.²⁹ The glue used to adhere this second reinforcement canvas probably did not contain lead white, unlike the first. If lead was present the contrast between the black lines corresponding to the tears and the white zones corresponding to the first layer of lining adhesive would have been attenuated in the X-ray. A large zone of reduced radiopacity, encompassing two tears, can be distinguished in the upper half of the canvas. It would seem that the lining adhesive for the original canvas was partially removed in this zone, perhaps by scraping.³⁰

The hypothesis of a transfer from wood to canvas has been envisaged in the past.³¹ This idea was rejected following a series of analyses carried out at the KIK-IRPA in 1973.³² Nevertheless, in 2003 the theory was put forward once again by Léopold Kockaert, a former chemist at the KIK-IRPA, and repeated in an article published in 2006 by Philippe Roberts-Jones, Jacques Reisse and Françoise Roberts-Jones.³³ Yet no valid argument was advanced to support this hypothesis. The paint layer shows no age crack pattern typical of a painting on wood panel either in normal light or in radiography. On the contrary, there are long thin oblique cracks typical of a work on canvas in the upper right corner. Moreover, if the painting had indeed been transferred from wood to canvas, traces of at least one join would appear on the X-ray or in infrared reflectography, which is not the case.³⁴ That a single wide plank would have been used for a panel of this size is inconceivable.

Radiocarbon Dating

The dating method based on the measure of the concentration of carbon 14 (¹⁴C) contained in an organic material is generally used for much older objects. Mark Van Strydonck (KIK-IRPA) attempted it on an experimental basis for the dating of the original canvas of the *Fall of Icarus* and published his results and interpretation in 1998.³⁵ The measure of ¹⁴C with accelerated mass spectrometry (AMS) only required a tiny sample from the original canvas (44 mg, to produce 1 mg of carbon), which was taken from an edge.³⁶ The result obtained after calibration takes the form of a probability curve. The canvas can be dated between 1555 and 1635 with a probability of 95.4%. Within this period there is a 68.2% probability for a range between 1582 and 1625.³⁷ The examination therefore shows that the canvas most likely dates from the late sixteenth or early seventeenth century – beyond Pieter Bruegel the Elder's period of activity.³⁸

Underdrawing

Infrared reflectography reveals a dry-medium carbon-based underdrawing with the appearance of black chalk or graphite (figs. 594-595, see also web 697 for infrared image of whole painting).³⁹ It establishes the outlines of the composition's main forms. Even motifs such as Icarus's legs⁴⁰ among the scattered feathers and the details of the background were determined at this stage. The masts and sail of the galleon to the right are fully outlined, as are the two figures working on the sails, although the dark paint of the boat masks any underdrawing that might lie beneath. Hatching strokes are rarely used, except for the ploughman's left leg, where they indicate the curve of his calf. The drawing is striking for its pared-down nature.

There is none of the expressivity that Bruegel the Elder introduced into his underdrawings, even in the most linear and systematic examples such as the *Census at Bethlehem* and the *Sermon of St John the Baptist*, as is shown by a comparison of the underdrawing of the outlines of the ploughman and shepherd in the *Fall of Icarus* with those of figures in the crowd in the *Sermon of St John the Baptist*, for example (web 698a).⁴¹ The somewhat nervous drawing line with which Bruegel habitually captured form and movement of animals, as in the *Census at Bethlehem* (web 698b), is markedly different from the mannered line used to describe the shape of the horse in the *Fall of Icarus*. The stiff lines defining the forms of the sheep, the ploughman and his plough and the sails of the galleon to the right are incompatible with Pieter Bruegel the Elder's graphic and purposeful approach. Nor does the drawing style recall that of Pieter Brueghel the Younger and his workshop. There are no traces of the animated wiry line that is a characteristic of the underdrawing of his copies, even when these were based on pounced layouts.⁴²

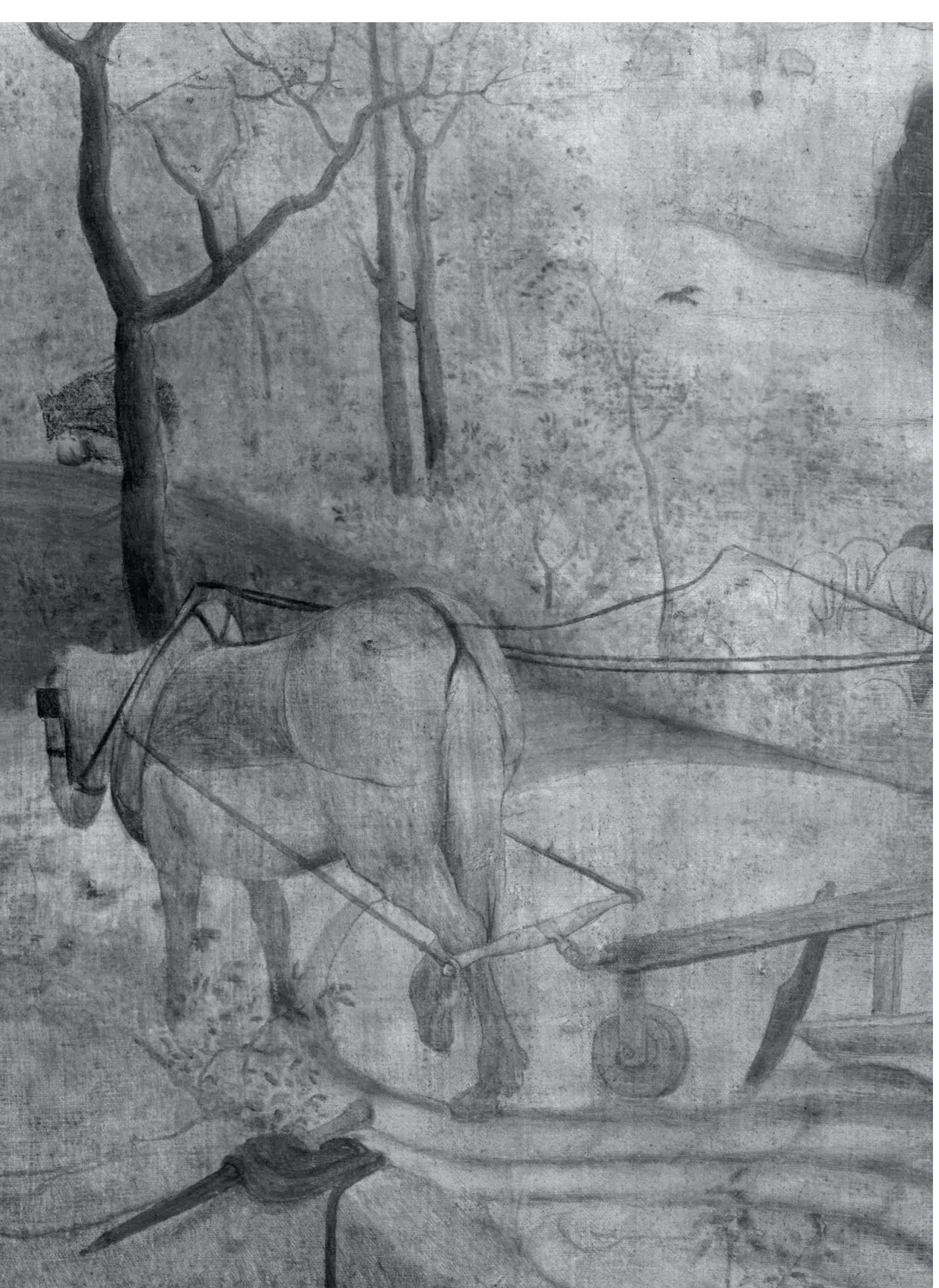
There are no detectible signs of hesitation or of even the slightest creative impulse in the underdrawing. *Pentimenti* are non-existent. The evidence points to a scrupulously faithful reproduction either of a preparatory drawing or of a pre-existing painting. The stiffness of the outlines in the foreground figures suggests that the main part of the design was transferred to canvas by mechanical means. The tests carried out in the course of this study have shown that transfer by means of a pricked cartoon or a tracing can produce a drawing of this nature.⁴³ The dots in the outline of the dog at the shepherd's foot suggest the use of a pricked sheet, although they may have been produced by the black chalk or graphite drawing point catching on the ridges of the canvas weave. Background details have clearly been executed freehand, however, and in distant boats and the coastal town to the left and fortress to the right they betray a certain negligence and lack of subtlety. The artist allowed himself no liberty of expression; his sole objective was to ensure the correct layout of the forms to be painted.

The infrared reflectogram brought to light useful details relating to the work's iconographic singularities. An indistinct motif in the left foreground, long interpreted as the head of a corpse lying in the thickets, can be now read rather differently (figs. 594, 596a, web 699). Previously it was seen as an allusion to a proverb that says the plough does not stop for a dying man.⁴⁴ The motif revealed by infrared reflectography has an altogether more trivial meaning,

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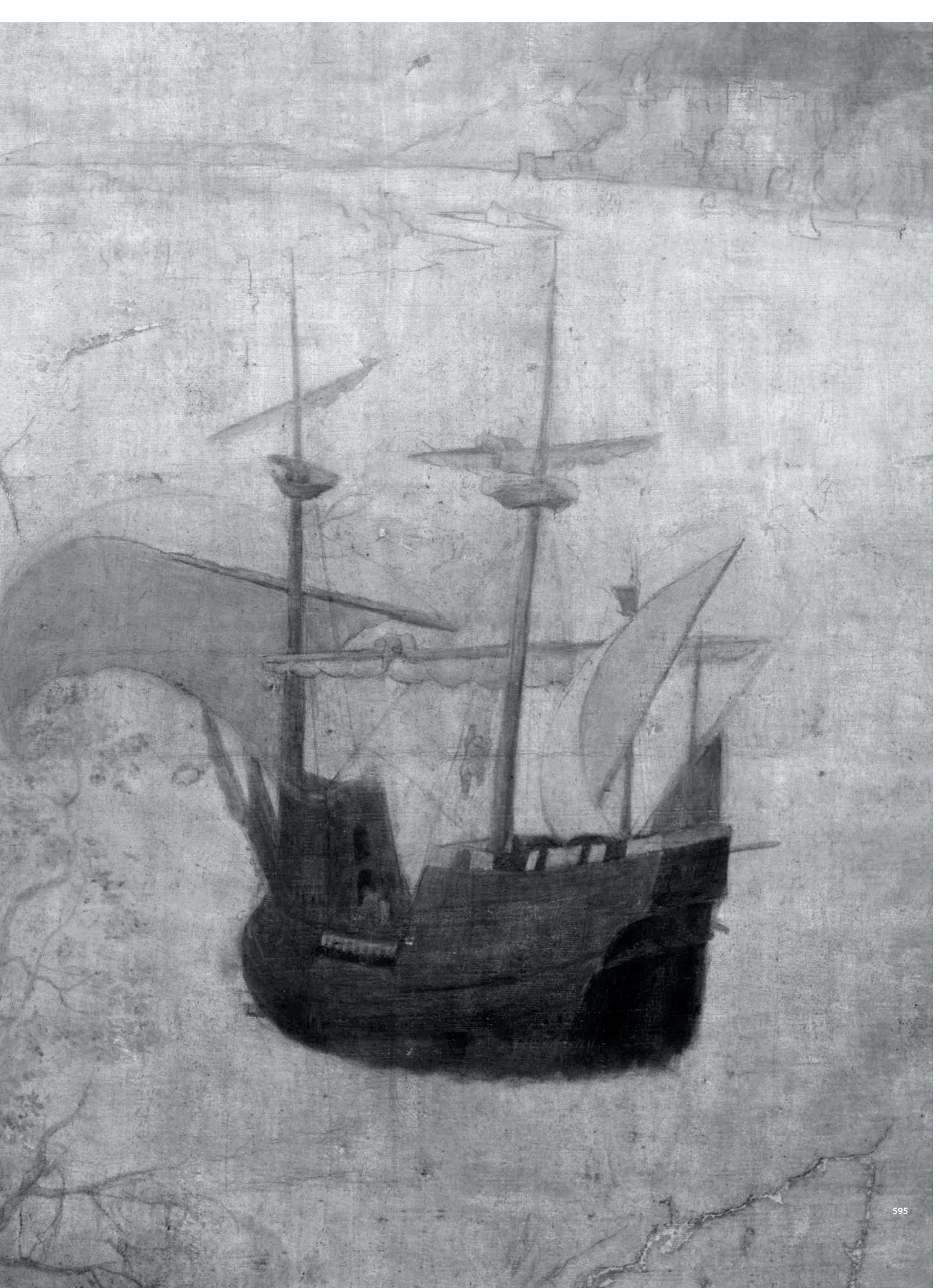
Fig. 594 Detail of underdrawing with ploughman and shepherd, KMSKB-MRBAB version, IRR

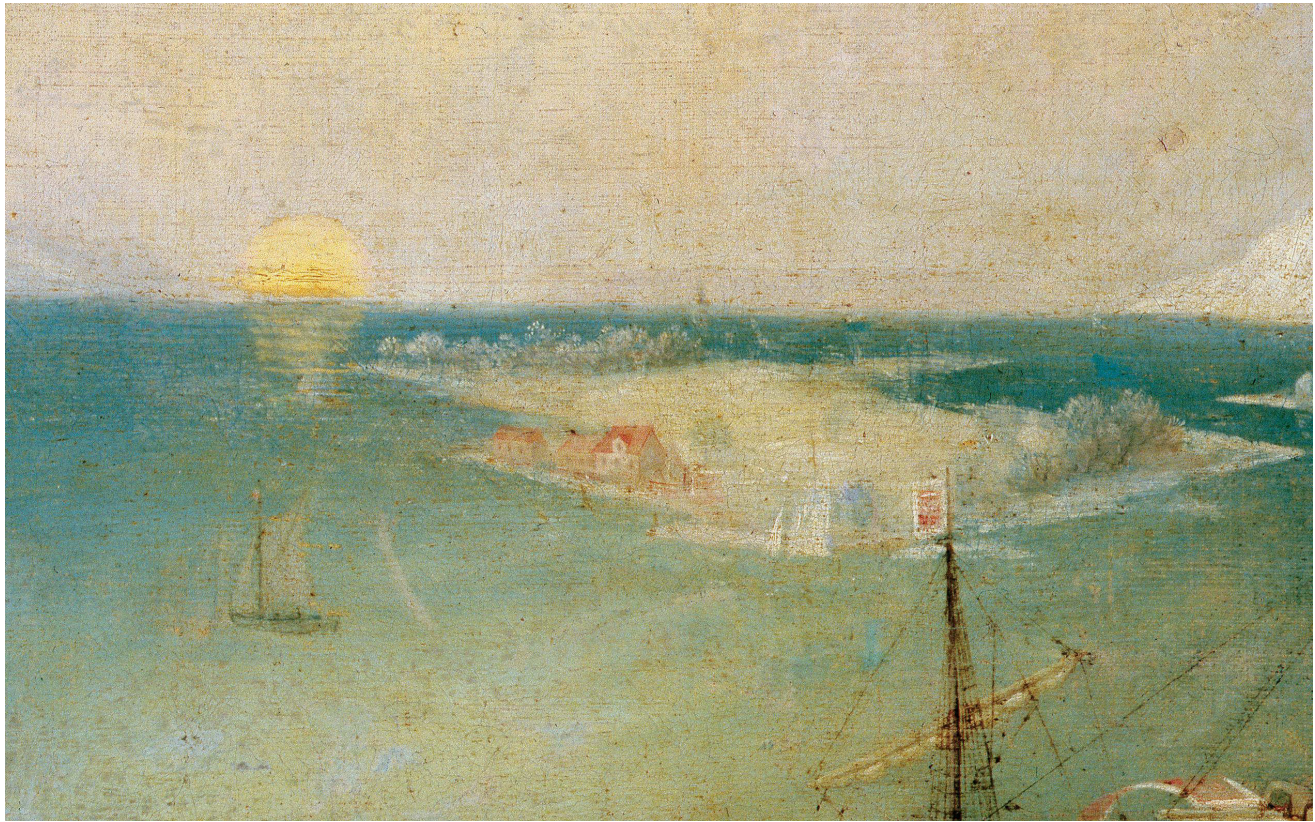
Fig. 595 Detail of underdrawing with galleon, small boats and distant mountains, KMSKB-MRBAB version, IRR











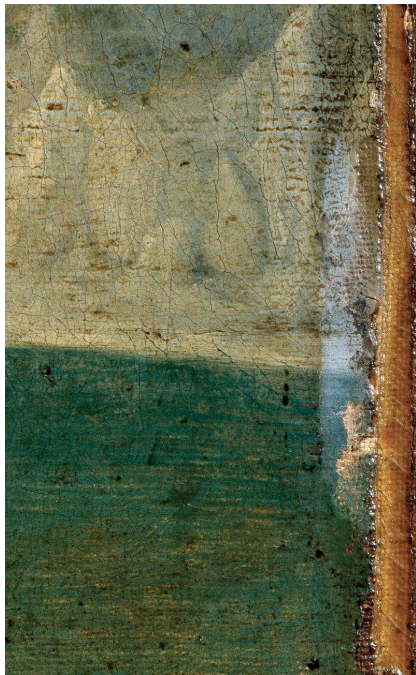
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Paint Layer

Badly abraded and covered by a thick yellow varnish, the present appearance of the painting is no longer representative of a work of the second half of the sixteenth century. Most of the pictorial surface appears significantly worn, allowing the canvas weave to show through. The sky shows crushed, irregular *impasto* and later overpaint, while distant mountains and rocky cliffs are compromised by crude retouching.⁴⁷ Heavy-handed as these interventions are, they have apparently captivated certain viewers and have even prompted eulogistic comments.⁴⁸ Indeed, the sun sinking beneath the horizon has been appreciated as ‘the highest poetic note of the work’. However, its impasted texture and the heavy horizontal lines suggesting its reflection in the water do not integrate well with the rest of the paint layer (fig. 598), and it seems likely that the setting sun was added by a restorer desirous of introducing a personal note into the composition – in spite of the luminous arc that indicates the solar height, the light that sparkles on the coastal town (fig. 601a), and the short shadows of the ploughman and his horse, which can only come from a sun near its zenith.

Even in zones that are less affected by retouching, the painting lacks any trace of Pieter Bruegel the Elder’s expressive brushwork. The appearance of the coastal town, with its compact and simplified forms, is very different from that of Bruegel’s urban panoramas. It has nothing of the light and subtle execution

Fig. 598 Sun, most probably a later addition, KMSKB-MRBAB version



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Conclusion

The KMSKB-MRBAB version of the *Fall of Icarus* is painted on an old canvas. Radiocarbon dating gives a 68.2% probability range between 1582 and 1625, although an earlier or later date between 1555 and 1635 is not out of the question.

There is nothing to support the hypothesis of a transfer from a wood panel to canvas. On the contrary, this has been shown to be highly improbable.

The paint layer, which is worn and has been extensively restored, no longer looks like a painting from the sixteenth or early seventeenth century. None the less, the one viable cross-section does reveal a layer structure and composition typical of a painting from this period. The sample's layer structure also suggests that the work was executed in oil rather than tempera. Other samples would be necessary to confirm this conclusion, however.

All things considered, the most useful data for addressing the problems raised by this work, particularly the issue of its attribution, are provided by the underdrawing. The greater part of the design may well have been transferred by a mechanical reproductive method (tracing or pouncing). Several details were executed freehand, however, and these betray an artist of mediocre talent. This scrupulous and schoolish copyist, whose approach is devoid of all spontaneity, cannot be identified with Pieter Bruegel the Elder, who even in his pre-determined compositions retained a certain creativity and vivacity. Nor has the style of the copy anything in common with that of Pieter Bruegel the Younger and his workshop.

The Version in the Van Buuren Museum in Brussels

Provenance

The version of the *Fall of Icarus* now in the Van Buuren Museum⁵⁴ had its first public showing during the *Exhibition of Ancient Art* held at Heysel in Brussels in 1935 (fig. 592). At that time it belonged to the Parisian collector Jacques Herbrand. Once the exhibition was over, Leo van Puyvelde, Chief Curator of the Brussels Museum of Fine Arts, asked Herbrand whether he would consent to the display of his panel painting alongside the museum's version on canvas.⁵⁵ Herbrand's version was the original, Van Puyvelde implied, whereas the museum's version was only a copy, a distinction the comparison would resoundingly confirm. Not unnaturally, Herbrand agreed. Consequently, the two paintings were exhibited side-by-side in the Brussels Museum of Fine Arts.⁵⁶ When Van Puyvelde mentioned the event in an article published in 1935 in the *Bulletin de la Société royale d'Archéologie de Bruxelles*, however, he performed a complete volte-face, asserting that the Herbrand version was merely a copy of the museum's original...⁵⁷ Strange to say, many years later, in 1951, Van Puyvelde advised David van Buuren to buy the Herbrand version, which he again attributed to Bruegel. Van Buuren acquired the painting in 1952 for the sum of 6,500,000 French francs.⁵⁸ The work was shown in the great exhibition *Flemish Art, 1300-1700*, held in the Royal Academy in London in 1953-1954.⁵⁹

In 1973, the Van Buuren house in Uccle (Brussels) became a museum. The *Fall of Icarus* is one the jewels of the collection.

Fig. 608 Cleaning test at the right edge, KMSKB-MRBAB version

Support

The support of the Herbrand-Van Buuren version is an oak panel measuring 62.5 × 89.7 centimetres. This is unlike any known format employed by Bruegel, being smaller than his 'large format' standard and bigger than his small one. It comprises three horizontal planks, whose joins do not seem to have been reinforced by dowels, according to the X-ray (web 700). The panel has been thinned and cradled (web 701).⁶⁰ There are neither *barbes* nor unpainted borders on the front. Comparison with the composition of the KMSKB-MRBAB version suggests the possibility of slight cropping to the left and right.

Joseph Vynckier (KIK-IRPA) carried out a dendrochronological examination of the support in 1996. This revealed that two of the planks are sourced from the same Baltic oak tree, whose most recent ring dates from 1568. Given the absence of sapwood, the panel can have been manufactured no earlier than 1577 (1568 + 9), well after Bruegel the Elder's death.⁶¹

Underdrawing

The underdrawing was executed in a dry medium and consists of fine outlines (fig. 609, web 702). It is clearly visible in infrared reflectography, which indicates that it was carried out in a carbon-containing material, which could be either graphite or black chalk. Although the drawing is not discernible beneath the entire composition its presence is suspected under the majority of motifs and figures, with the exception of Daedalus, Icarus and the fisherman, and the bushes between the shepherd and the fisherman. It is very summary under the coastal town and in the rocky landscape to the right.

There is little visible underdrawing for the great galleon making its way out to sea (fig. 610a). The main outlines are indicated here and there with faint, wiry drawing lines, as is the occasional detail such as the anchor, but these are often partially concealed by the paint layer (fig. 610b). Finicky details such as the rigging appear to have been added at the painting stage (see below).

As in the KMSKB-MRBAB version, the underdrawing serves to position the outlines and details and is almost totally lacking in hatching strokes. But it differs radically from that of the canvas version in its strong individualization. The lines are composed of short discontinuous nervous strokes that more or less superpose each other to produce the final outline. It is as if the artist was feeling his way around the forms. Quite obviously, therefore, the drawing is the result of freehand execution. Sketchy as it appears, however, the underdrawing was adhered to during the painting stage. There are no changes of mind or modifications to be seen, indicating that the composition was pre-established. The artist must have had a model in front of him, in the form of a drawing or a painting.

Attempting to identify this copyist goes beyond the framework of the present work. None the less, it is clear that the underdrawing style differs appreciably from that of both Pieter Bruegel the Elder and Pieter Brueghel the Younger, as does that of the canvas version.

Infrared reflectography also reveals that a small humorous figure (the 'vulgar detail') was initially represented in the same place as the corresponding motif in the KMSKB-MRBAB painting (fig. 596a). The modification of this figure

Following pages:

Fig. 609 Detail with the ploughman and the shepherd, Herbrand-Van Buuren version, showing the underdrawing and losses to the paint layer, IRR

Appendix II

Historical Copying Techniques

Pieter Brueghel the Younger's achievement as copyist *par excellence*, although remarkable in terms of the scale of his production and the fidelity of his copies to the original versions, was rooted in a long tradition. A brief survey of copying methods before and during his period of activity shows that the copying of images – and efforts to find the most efficient means of doing so – can be traced back to the Italian Quattrocento or even beyond.

From the fifteenth to the seventeenth century, painters in Western Europe wishing to reproduce images accurately often opted for mechanical aids and tools.¹ Scientific examination of paintings from this period has identified tracing, pouncing and squaring-up techniques. The proportional compasses, available from the sixteenth century, and the pantograph, published in 1631, are more difficult to qualify, as these instruments leave little or no trace on the artwork.²

Mechanical methods of reproduction served a dual purpose in the artist's workshop: to transfer original compositions or individual motifs from one support to another – from cartoons to the final panel, canvas or wall, for instance – and in the production of copies.³ Although the various transfer techniques are separately described below it should be emphasized that artists frequently used more than one method in the production of a single work of art.

Cartoons

Cartoons are drawings made to the scale of the projected work of art. The term refers to both final stage preparatory drawings and more basic working sheets with compositions or parts of images used for reproductive purposes. Fifteenth- to seventeenth-century cartoons might consist of a single sheet of paper or could be pasted together from separate sheets, depending on the required size. Tracings made on translucent paper to record an image can also be considered a type of cartoon. Cartoons were used for the transfer of designs for easel and wall paintings, tapestries, stained glass, ceramics and marquetry. Transfer techniques included pouncing, tracing, incising and stencilling.

From surviving examples, mostly Italian, we know that cartoons for wall and easel painting ranged from rudimentary working sheets consisting of accurate outlines to drawings with some indications of light and shade through to elaborate *chiaroscuro* studies. For tapestries and stained glass, cartoons were also coloured as a guide for the artisans who executed the designs.

Many surviving Italian drawings and studies have been pricked or stylus-incised for transfer to other supports.⁴ These sheets often comprise single motifs or groups of motifs and were used and reused in different compositions.

Fig. 626 Alessandro Paganino, *Libro Primo: De Rechami (Il Burato)*, Venice, c.1532, folio 2, verso, New York, Metropolitan Museum of Art; in the lower left, a woman is using the pouncing technique to transfer a design

transfer of floral or abstract patterning or architectural forms, such as the architectural motifs on the reverses of the upper parts of the wing panels of an altarpiece that was placed in the church of St Bertin at Saint-Omer in 1459 (London, National Gallery), most probably by Simon Marmion, who was working in Valenciennes in 1458.⁶¹ Justus of Ghent and his workshop also used a pounced design for the transfer of the patterned cloth on the stairs in the painting *Rhetoric* from the *Liberal Arts* series (London, National Gallery), probably made while the artist was working in Urbino in 1473-1474.⁶²

Copies after paintings of the Brussels school frequently reveal pouncing as the means of transfer, such as a copy after Robert Campin's *Virgin and Child in an Apse*, undated (Ohio, Toledo Art Museum),⁶³ a *Virgin and Child* by a follower of Rogier van de Weyden, undated (sold Sotheby's, London, 12 July 2001, lot 4)⁶⁴ and a *Holy Family*, undated (Brussels, KMSKB-MRBAB) from Bernard van Orley's workshop (c.1488-1541).⁶⁵

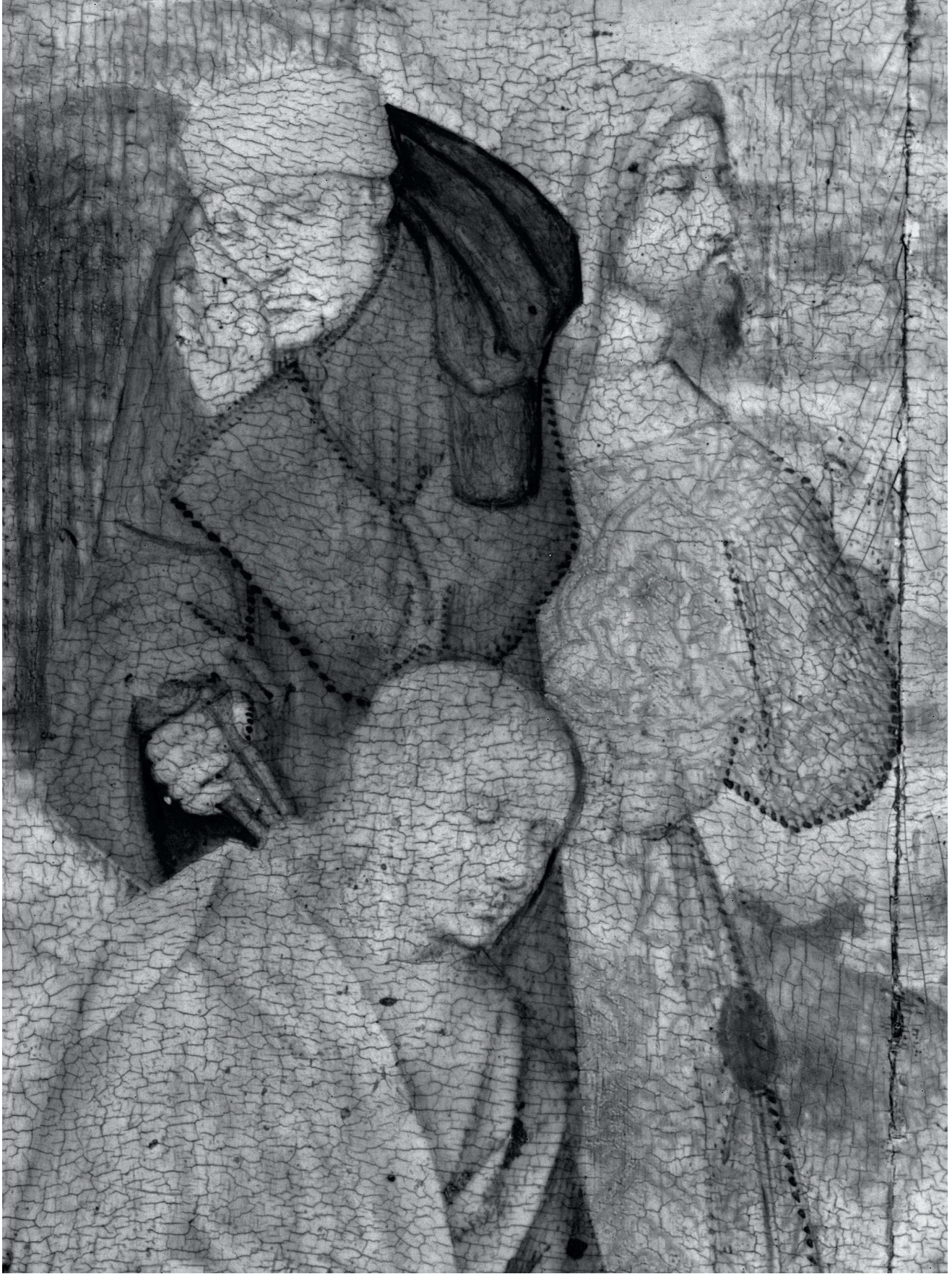
Pouncing is especially common in paintings of the Bruges school around the turn of the sixteenth century. In many works, as with Brueghel the Younger's *Battle between Carnival and Lent*,⁶⁶ the survival of the pouncing marks would appear to be accidental rather than intentional. There are several examples in the work of Gerard David (c.1460-1523), who moved to Bruges from the Northern Netherlands in 1484. In the *Adoration of the Magi* (Munich, Alte Pinakothek), David appears to have pounced and then underdrawn the design on an irregularly tacky ground layer, leading to permanent pouncing in certain areas: the zones of pouncing are associated with broken-up or congealed brushstrokes in the subsequent underdrawing.⁶⁷ In the same painting, certain important motifs show no pouncing at all. In these areas the brushstrokes of the underdrawing are even and not beaded-up in any way, indicating that these parts were pounced and underdrawn once the ground was dry.⁶⁸ Similar observations were made in four versions of David's *Virgin and Child with the Milk-Soup*, three of which are attributed to the hand of the master himself (Brussels, KMSKB-MRBAB; New York, Aurora Trust; Genoa, Palazzo Bianco; San Diego, Deutz Collection). In all four works, the pouncing was subsequently gone over with a liquid underdrawing, but as these lines are broken up or congealed, it is possible that the artist was working with an oil medium on a still-moist aqueous ground layer, which would also have fixed the pouncing dust.⁶⁹

The Adriaen Isenbrant (1481-1551) group also provides many examples of pouncing, for instance in the small scenes surrounding *The Madonna of the Seven Sorrows* from the right wing of the *Joris van de Velde Diptych*, 1521 (Bruges, Onze-Lieve-Vrouwekerk, web 708).⁷⁰ In this scene, the pouncing marks that indicate the contours of the main figures have been connected with a liquid medium, whereas the pouncing dots defining the decorative architectural stonework are unjoined. Pouncing has also been detected in Isenbrant's *Portrait of Paul the Negro*, 1518 (Bruges, Groeningemuseum).⁷¹ On the right wing of a triptych attributed to Jan Provoost (c.1465-1529) from the first quarter of the sixteenth century (Genoa, Palazzo Bianco), there are traces of pouncing marking out the mouth of St Elizabeth of Hungary.⁷² Lancelot Blondeel (1498-1561) used the technique for at least one figure in his *Virgin and Child*



628a

Fig. 628 Master of the Lamentation of Amiens, *Lamentation of Christ*, panel, 46.1 x 36.4 cm, Amiens, Musée de Picardie
a whole painting
b detail, showing pouncing reinforced in a liquid medium, IRR



628b

with *St Luke and St Eloi*, 1545 (Bruges, Onze-Lieve-Vrouwekerk).⁷³ Pieter Pourbus (1523/4-1584) also used pouncing to transfer the decorative frames of the *tondi* in the centre panel of the *Joos van Belle Triptych*, 1556 (Bruges, Sint Jakobskerk).⁷⁴

Another case of joined pouncing is seen in a copy after Dutch artist Marinus van Reymerswaele's (c.1490-c.1567) *St Jerome*, undated (Haut-Ittre, église Saint-Laurent), where all the pouncing marks in the face, hands, drapery, skull and still-life elements have been carefully gone over in a liquid medium (fig. 627).⁷⁵

In Antwerp, pouncing – with or without underdrawing – also appears to have been routinely used to transfer images for workshop copies. It is present under two versions of *The Holy Family* by Joos van Cleve (c.1480/1490-1540) and his workshop (New York, Metropolitan Museum of Art, Bequest of George Blumenthal, and Houston, Texas, Museum of Fine Arts). In the Houston work the IRR image clearly shows that the pouncing dots were joined up afterwards.⁷⁶ Pounce marks have also been identified under some of the architectural elements in another copy from the same workshop, *The Infants Christ and John Embracing*, undated (The Hague, Mauritshuis).⁷⁷ A copy after Hieronymus Bosch (c.1450-1516), *The Temptation of St Anthony*, undated (Noordbrabants Museum, 's-Hertogenbosch, on loan from the Rijksmuseum, Amsterdam) is also clearly transferred by pouncing – continuous pouncing is detected under all the outlines and fold lines of the figures, with no subsequent underdrawing.⁷⁸ Likewise, the composition of the central panel from the large-scale triptych of the *Adoration of the Magi*, c.1515-1520 (Diest, Sint-Sulpitiuskerk) by an anonymous Antwerp master provides a particularly dramatic case of pouncing without underdrawn reinforcement, for the composition is entirely transferred by pouncing, the pounce marks standing alone as indicators of outline, drapery folds and light and shade (web 709).⁷⁹

More unusually, in a small panel, the *Lamentation of Christ*, c.1470-1490, by the Master of the Lamentation of Amiens (Amiens, Musée de Picardie fig. 628, web 710), the artist has reinforced pouncing marks with liquid dots as part of the underdrawing stage.⁸⁰ Very short dashes in a liquid medium, probably fixing pouncing marks, also indicate the outlines of the eyes, nose and mouth of the Virgin's face in the *Triptych of the Virgin and Child in a Landscape* by the Master of the Grog Madonna, dated to the last quarter of fifteenth century (Burgos, Museo Diocesano-Catedralicio, fig. 629, web 711).⁸¹

Outside Italy and the Netherlands, Hans Holbein the Younger (1497-1543), who worked in Switzerland and England, used pouncing to transfer images for both wall paintings and portrait panel paintings. This is demonstrated by the survival of the aforementioned pricked cartoon for a wall painting for the Privy Chamber of Whitehall Palace in London and the presence of pouncing in various portraits, such as *Erasmus of Rotterdam*, undated, probably before 1532 (New York, Metropolitan Museum of Art).⁸² In this painting, what appears to be unjoined pouncing is seen for the outlines of the face and facial features.⁸³ Early German paintings also occasionally reveal pouncing: it has been identified in the *Annunciation* panel of the *Albrechtsaltar*, 1439-1440 (Stift Klosterneuburg, Austria),⁸⁴ where it indicates the outlines of the decorative



629a

Fig. 629 Master of the Grog Madonna, *Triptych of the Virgin and Child in a Landscape*, central panel, 116.0 x 73.0 cm, Burgos, Museo Diocesano-Catedralicio
a central panel
b Virgin's face, with joined pouncing, IRR



629b

motifs in the textile draped over the lectern, and also in Lucas Cranach the Elder's *Portrait of Kanzler Georg Brück*, 1533 (Nuremberg, Germanisches Nationalmuseum).⁸⁵

As far as we know, the transfer of compositions by pouncing seems to have been practiced only rarely by seventeenth century painters, except in the workshop of Pieter Brueghel the Younger.

In addition to proven cases of pouncing, researchers concede that this technique may have been used to transfer the design to the final painting support even where no traces are revealed by infrared. If an artist used the 'erasive' method, whereby the unfixed powdery dots were joined up in a permanent medium, any remaining pouncing dust would have been intentionally wiped away to prevent dirtying the paint layer and residual traces would have been obliterated during painting.⁸⁶ Advice on cleaning away pouncing dust is found in certain source documents, such as Catherine Perrot's *Traité de la Miniature*



(‘Treatise on the Miniature’), Paris, 1625, in which she recommends removing pouncing marks from silverpoint drawings on vellum with a piece of soft bread.⁸⁷ Technical examination of works by Perugino, Raphael and Raffaellino del Garbo (c.1466-1524) using superposed tracings and infrared reflectography suggested that ‘erasive pouncing’ was a commonly used technique in Italian panel painting in the fifteenth and early sixteenth century.⁸⁸ The research emphasized the absence of traces of pouncing and the apparently ‘freehand’ quality of the underdrawings – something we have also seen in the present study of Pieter Brueghel the Younger.

The transfer of designs using pounced cartoons was not confined to painting and drawing; other disciplines employed the same technique, including manuscript illumination,⁸⁹ inlaid furniture,⁹⁰ ceramics,⁹¹ embroidery and silk weaving.⁹² Georgius Van Os, a Dutch nineteenth-century still-life painter, used an unusual variant of the pouncing technique. In one of his flower paintings from the 1830s he transferred the design with cartoons, but instead of rubbing dark powder through perforations he seems to have used a single-row spiked roulette or pinwheel, incising tiny holes into the tinted *imprimatura* layer to reveal the white ground (fig. 630, web 712).⁹³ In the 1870s the American realist painter Thomas Eakins also appears to have transferred some motifs to canvas by pricking through drawings in certain of his rowing paintings.⁹⁴

Tracing

Transferring a design by tracing appears to have been a common method in the fifteenth to seventeenth centuries as the practice is referred to in most sources and manuals on painting from this period. In fact, the word ‘tracing’ refers to two distinct processes:⁹⁵ the first involves recording the image to be transferred by placing a sheet of transparent paper over it and marking the outlines; the second relates to the transferring of a design to another surface. The latter process entails either directly incising the outlines of a cartoon through to another support⁹⁶ or the ‘carbon copy’ method, in which the back of the cartoon is coated with a dark pigment and then the sheet is laid dark side down on a new support and the outlines are gone over with a hard point. Alternatively, as suggested by Leonardo, the traced sheet could be pricked and used directly for transfer.⁹⁷

Instructions for the preparation of transparent sheets, or *carta lucida*, for the recording of images by tracing are given in various Italian and French sources, including treatises by Cennino Cennini (late 1390s), Jehan Le Bègue (1431), Raffaello Borghini (1584)⁹⁸ and Giovanni Battista Armenini (1586),⁹⁹ as well as the Paduan Manuscript (late sixteenth century) and Volpato Manuscript (1670 or later).¹⁰⁰ Cennini’s first suggestion is to ‘take a kid parchment and give it to a parchment worker; and have it scraped so much that it barely holds together. And have him take care to scrape it evenly. It is transparent of itself. If you want it more transparent, take some clear and fine linseed oil; and smear it with some of this oil on a piece of cotton. Let it dry thoroughly, for the space of several days; and it will be perfect and good.’¹⁰¹ He goes on to describe the making of a transparent sheet from glue and then relates how to prepare



630b

Fig. 630 Georgius-Jacobus-Johannes Van Os, *Still Life*, canvas, 92.8 x 73.7 cm, signed and dated 1836-1837, Musée Vauban, Collections of the City of Luxembourg
 a detail, showing holes resulting from rolling a pinwheel over a cartoon
 b whole painting