



National Gallery Technical Bulletin

Volume 21, 2000

National Gallery Company
London

Distributed by
Yale University Press

Series editor **Ashok Roy**
Associate editor **Jo Kirby**

©National Gallery Company Limited 2000

All rights reserved. No part of this publication may be transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without the prior permission in writing of the publisher.

First published in Great Britain in 2000 by National Gallery Company Limited, St Vincent House, 30 Orange Street, London WC2H 7HH

British Library Cataloguing in Publication Data
A catalogue record for this journal is available from the British Library

ISBN 1 85709 251 1
ISSN 0140 7430
525457

Edited by **Diana Davies**
Project manager **Jan Green**
Typeset by **opta**
Printed in Italy by EBS

FRONT COVER

Lorenzo Monaco, *The Coronation of the Virgin*
(NG 215, 1897, 216) (detail of Plate 1, p. 44)

TITLE PAGE

Carlo Crivelli, *The Dead Christ supported by Two Angels*
(NG 602; detail), after cleaning and restoration

The Virgin and Child Enthroned with Angels and Saints attributed to Michael Pacher

JILL DUNKERTON, SUSAN FOISTER AND MARIKA SPRING

THE SMALL PAINTING showing *The Virgin and Child Enthroned with Angels and Saints* (Plates 1 and 3) was bequeathed to the National Gallery in 1947 by Miss Anna Simonson.¹ It had already been exhibited in 1932 as the work of Michael Pacher,² but the attribution to Pacher himself has been the subject of considerable debate ever since. The painting has been accepted by some art historians as a rare surviving example of a small devotional picture by the great Tyrolean painter and sculptor, while for others its authorship must lie among the somewhat mysterious and ill-defined members of the Pacher family and workshop.³ In 1997–8, prior to the painting's loan to the 1998 exhibition at Klosterneustift, *Michael Pacher und sein Kreis*,⁴ it was cleaned and a number of samples were taken for analysis. The cleaning provided the opportunity for a detailed examination of the painting with the aim of assessing its technique – exceptional among works in the National Gallery Collection – in the context of workshop practice in the South Tyrol in the second half of the fifteenth century.

The subject of the enthroned Virgin and Child with saints is common in both Northern Europe and Italy, but the architectural presentation of this composition, with its elaborate stone canopies set against a gilded background carved into the chalk ground, is particularly distinctive and unusual, as is the degree of animation of the small figures who appear to play out a small-scale drama before our gaze. Not only are the figures varied by being deliberately set at differing angles to each other and to the spaces they inhabit, but they also respond to one another in various ways, resulting in an interplay of relationships and actions within the picture which holds our attention. Saint Michael raises his sword and seems to concentrate not on the vanquished devil at his feet but on the two little devils – one trying to tilt the balance by carrying a miniature millstone – who have struggled onto the scales in order to outweigh the pious soul in the right-hand weighing pan. On the right of the picture, in contrast, is the still figure of an unidentified bishop saint, standing with a

book in his right hand and a crozier in his left hand.⁵ The angel on the right below the Virgin offers the Child a rose but the Child seems, disconcertingly, to ignore him and instead, smiling, tries to grasp the pear offered by the left-hand angel, who stretches up as the Child reaches down. The action is observed by both angels on the pedestals above: the one on the left looks directly down, while the one on the right, whose view of the action is slightly obscured, has to lean forward. Their gazes are joined by that of the Virgin who sadly observes the Child's action. Finally there is an additional drama played out against the arches above, where the small figure of the Annunciate Virgin bows her head in response to the greeting of the Angel Gabriel.

The larger-scale figures are placed in elaborate niches and the small ones are perched on ledges and pedestals in the same way as in sculpted wooden altarpieces (Plate 2), but here the colours indicate that this fantastic architecture is to be imagined as carved from stone. The triangular projecting canopies are echoed by the curves and angles of the marbled step and flooring in the foreground. The sense of space created by the slender columns placed directly behind and to the side of the main figures is both mitigated and enhanced by the gilding of the carved floriate forms behind, which echo and contrast with the pierced trefoil decoration of the canopy above. The effect of the whole is dense and complex, though on a small scale. It is clear that the painting is the work of a sophisticated artist. The small size and high degree of finish of the painting, as well as its decoratively marbled reverse, suggest that it was intended as a private devotional picture, possibly with shutters.⁶

Michael Pacher is best known for his large altarpiece ensembles consisting of both sculpted wood and painted panels, of which the only complete surviving example is the Saint Wolfgang Altarpiece of 1471–81, still *in situ* in the pilgrimage church of that name on the Wolfgangsee. That at Gries from 1471 remains in the parish church but is incomplete, while those made for the parish churches in St Lorenz (now San Lorenzo di Sebato in the Val Pusteria),



Plate 1 Michael Pacher, *The Virgin and Child Enthroned with Angels and Saints* (NG 5789), c. 1475. Oil on stone pine, 41.8 × 40.6 cm. After cleaning and restoration.



Plate 2 Michael Pacher and workshop, *The Coronation of the Virgin with Saint Michael and Saint Erasmus*, 1471. Gold and silver leaf, applied relief brocade and oil paint on carved stone pine, 360 × 300 cm (central shrine). Gries (Bolzano), old parish church.



Plate 3 *The Virgin and Child Enthroned with Angels and Saints*. Before cleaning.

after 1462, and Salzburg, in 1484–98, survive only as dispersed fragments (Plates 5 and 6). No remains have been identified from the documented Bolzano altarpiece of 1481–4. The large painted altarpiece representing the Four Fathers of the Church (Plate 4), now in the Alte Pinakothek, Munich, was made, probably in the mid or late 1470s, for the choir of the abbey church of the Augustinian monastery at Klosterneustift. This is the work that can most closely be related to the National Gallery panel, both in the richly decorative architectural settings with similar canopies projecting over the almost life-size figures, and in certain details, such as the grisaille figure of Saint Catherine in the Saint Ambrose panel, whose slender neck and inclined head resemble those of the Virgin in the smaller panel. The whole altarpiece, above all the scene of *Saint Augustine disputing with Heretics* on the outer left shutter, shows the the same interest in gesture and interaction between figures, especially through eye contact, that has been observed in the National Gallery picture. Nevertheless, the huge difference in scale (even the Virgin embroidered on Saint Augustine’s cope is considerably larger than her counterpart in the small panel) and the greater breadth of handling involved in the large work make for difficult comparison. The only smaller works that can be compared directly with the National Gallery picture, the two panels showing the *Assassination* and *Funeral of Saint Thomas a Becket*, cut from the shutters of a small altarpiece



Plate 4 Michael Pacher, *The Four Fathers of the Church*, probably mid or late 1470s. Oil on stone pine, outer panels 216 × 91 cm, inner panels 212 × 100 cm. Munich, Alte Pinakothek.



Plate 5 Michael Pacher, *The Annunciation*, from the inner shutter of the Saint Lawrence Altarpiece, c.1470. Oil on stone pine, 100 x 97 cm. Munich, Alte Pinakothek.



Plate 6 Michael Pacher, *The Arrest of Pope Sixtus*, from the outer shutter of the Saint Lawrence Altarpiece, c.1470. Oil on stone pine, 104 x 100 cm. Vienna, Österreichische Galerie.

from Klosterneustift and now in Graz (Plate 7), are similarly undocumented and have been variously seen as early works by Pacher himself or as the product of the workshop without the intervention of his hand.⁷ Moreover, even in the case of Pacher's well-documented commissions, as an artist who ran a large workshop encompassing both painting and sculpture, it is inevitably difficult to define exactly where his personal contributions lay.⁸

The Virgin and Child Enthroned with Angels and Saints had been cleaned in 1948–9, soon after it came into the Collection.⁹ It was noted then that no resinous varnish layer appeared to be present, although, judging by the photographs, the coating on the painted area was extremely discoloured.¹⁰ Most of this layer had been removed, but the painting had not been cleaned evenly, with disfiguring residues left in the depressions in the paint surface (Plate 8). This gave the impression that it was not as well preserved as is actually the case. In fact, it has suffered no more than a few small flake losses, most of them from areas of dark red paint on Saint Michael's cloak and wing and in the inlaid decoration of the tracery of the central canopy, and some abrasion, affecting mainly the thinly glazed cast shadows and the marbled floor tiles in the foreground (Fig. 1). By the time the painting came to be considered for further treatment the retouchings applied in the last restoration had discoloured, even though the varnish remained in good condition and was only slightly yellow. The treatment undertaken in



Fig. 1 *The Virgin and Child Enthroned with Angels and Saints*. After cleaning before restoration.

1997–8 involved the removal and replacement of the varnish and retouchings and, more importantly a reduction of the uneven residues of the old coatings.¹¹ The improvement was considerable, above all in the complex mouldings of the canopy. Previously it had not been apparent that the facets of the pillars that support the arches and tracery are lit from two sources: the main light source, from the right and in



Plate 7 Michael Pacher, *The Assassination and The Funeral of Saint Thomas a Becket* (inner shutter) and *Symbols of Saint Mark and Saint Luke* (outer shutter), c.1470. Oil on panel, each 44 × 43.5 cm. Graz, Landesmuseum Joanneum.

front of the picture plane, and a second internal source, the radiance of the decorative gilded background (Plate 8).

The wood of the panel has been identified as stone pine (*Pinus cembra*),¹² the wood commonly used by Pacher for the carved elements of his altarpieces as well as for their complex structures. Although fir was chosen for the painted shutters of the Saint Wolfgang Altarpiece,¹³ stone pine has been reported as the wood of many of Pacher's panels including those from the dispersed Saint Lawrence and Salzburg altars.¹⁴ Some softwood panels have a very pronounced grain, which may become more evident with time,¹⁵ but the stone

pine used for the National Gallery panel must have grown very slowly high on the slopes of the Alps and consequently the planks show exceptionally close and tight growth rings.

Nothing of the panel registers in the X-radiograph (Fig. 2) and the wood is now visible only where exposed by flaking of the painted decoration on the reverse (Fig. 3). The panel has been carefully constructed from two vertical planks, 1.2 cm thick, with the join 12.1 cm from the right edge and running through the architectural division between the niches for the bishop saint and the central Virgin. The join has remained tight, but can be located by the opacity



Plate 8 *The Virgin and Child Enthroned with Angels and Saints*. Detail during cleaning.

to X-rays of the adhesive, and, more evidently, on the damaged reverse. An indication of the care with which the panel was made is the setting of a small square of wood into the centre of the larger plank. It is apparent only on the reverse and does not seem to extend through the full thickness of the panel. It would seem that a fault had to be cut out and replaced with an inlay, even though this was to be the less important reverse. Many similarly neat rectangular inlays can be detected on the painted surfaces of the shutters from the Saint Lawrence and Salzburg altars and on the Four Fathers of the Church panels.

Before the application of the ground on the front face of the panel, a piece of fabric with a fine but very open weave (with a maximum of 10 warp, 10 weft threads per cm²) was glued to the wood. In the X-radiograph it can be seen that, although the right edge is cut (Fig. 2), the frayed and ragged edges stop just short of the left and upper edges of the painted area and between six and eight centimetres short of the lower edge. Since it would have been easy to tear off another strip to add to the uncovered lower part, it seems that the fabric was considered important

mainly for the area to be gilded. X-radiographs of the Saint Thomas a Becket panels in Graz also show scraps of fabric underlying the gilded backgrounds to the symbols of the Evangelists on their reverses.¹⁶

The ground of the National Gallery panel, built up to a considerable thickness to allow for the carving of the relief pattern in the gilded background, is composed of chalk in a glue medium.¹⁷ On the reverse, however, the ground is less thickly applied and contains mainly dolomite (calcium magnesium carbonate), a mineral that was readily available locally, and so far found only on paintings of the fifteenth and sixteenth centuries from Southern Germany and the Tyrol. The same combination of a chalk ground on the front faces of the panels and dolomite on less important reverses has been discovered on the Saint Wolfgang Altarpiece, and also over fine canvas applied to all the wooden surfaces, both flat and sculpted.¹⁸

Although there is a narrow unpainted border around all the edges, both the panel and the painted area have in fact been trimmed by varying amounts. At the lower edge fragments of gold leaf can be seen under the paint layers, indicating that the frame

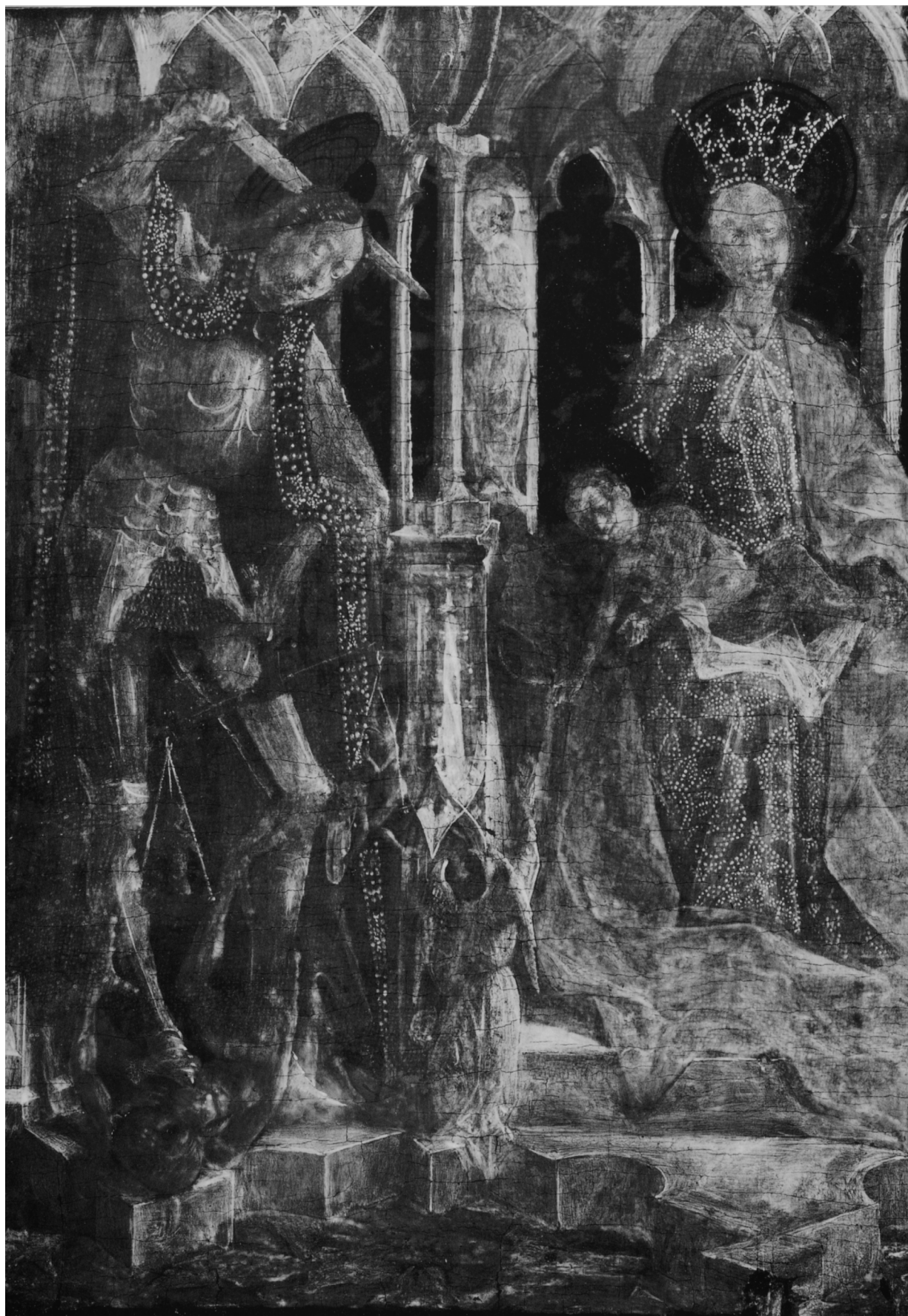


Fig. 2 *The Virgin and Child Enthroned with Angels and Saints*. Detail from X-radiograph.



Fig. 3 *The Virgin and Child Enthroned with Angels and Saints*. Reverse.



Plate 9 *The Virgin and Child Enthroned with Angels and Saints*. Detail of marbling on reverse.

mouldings were attached to the panel and grounded and gilded before painting began. Towards the corners the chalk ground has seeped, while still liquid, under the frame moulding and onto the now exposed wooden border. When the frame mouldings were removed (at an unknown date), not only was the panel trimmed, but also the edges of the painted area were neatened by trimming the presumably chipped and ragged raised barbe formed at the junction between flat surface and frame. However, along all but the right edge, occasional traces of the barbe can be found on both the front and reverse, and so no part of the image has been lost along these edges. The right edge, on the other hand, is definitely cut. As well as the evidence of the fabric glued to the wood, it can be seen that the ground and painted decoration

on the reverse extend to the very edge of the panel. The unpainted border at the front was evidently made by chipping away some of the ground and paint, but probably by no more than the 0.5 cm that makes the architecture symmetrical with that on the left.

The way in which the projecting canopies and central step are intersected by the picture edge might be thought surprising, and is certainly daring, but it has the effect of pushing the architectural setting back into the picture space so that it is truly framed as if seen through a window opening. It also avoids the admittedly fascinating spatial ambiguity of the Four Fathers of the Church panels (Plate 4). In these the canopies project to meet the fictive frame mouldings at the top and therefore the picture plane itself, while, in the lower parts, the cutting by the real frame of the receding floor tiles and figures and elements in the foreground implies a greater distance between picture plane and the enthroned saints. Furthermore, *The Virgin and Child Enthroned with Angels and Saints* – as a small devotional panel – would never have had the fixed viewing point indicated by the perspective constructions of the Four Fathers panels.

The frame mouldings must have been assembled around the panel in much the same way as those on the Saint Wolfgang shutters.¹⁹ With their removal and the trimming of the panel any evidence has been lost as to whether there were ever any hinges. The rich and generally well-preserved colours of the National Gallery panel might suggest that it has been protected by shutters, but some other form of protective cover could also have been fitted. The decoration of the back of the panel to imitate porphyry or a coloured marble by spattering a black base colour with red earth and lead-white paints, and then painting veins with red earth (Plate 9), does not necessarily indicate that it was a folding altarpiece. There are many single devotional panels with similarly decorated reverses, especially from Italy.²⁰

The single-point perspective constructions of Pacher's large altarpiece shutters were established by incising the orthogonals into the ground, as well as the principal straight lines of the settings.²¹ The only incisions in *The Virgin and Child Enthroned with Angels and Saints* were made to demarcate the areas to be carved and gilded – scored lines can be seen at the tops of the pillars to the left of the bishop saint (Plate 8) – but the design of the setting is such that the only true orthogonals are those of the inlaid marble of the second of the three steps up to the Virgin's throne, and these were evidently painted freehand. Indeed, the whole design, with the extraordinary multi-faceted steps and canopy, and the random

‘crazy paving’ design of the marbled foreground, seems calculated to avoid the insistent recession of single-point perspective, imitating instead the shallow space of a carved altarpiece.

Such a complex design could not have been executed without a detailed underdrawing, and hints of such a drawing can in places be detected by surface examination of the picture. Unfortunately, it has been executed using a material, perhaps an iron-gall ink, which is completely transparent at all wavelengths used in infra-red examination.²² An indication of the likely complexity of the drawing is suggested by the detail of the naked human soul in the scale pan of Saint Michael: under magnification it can be seen that even the modelling of his buttocks (no more than 5 mm across) has been precisely indicated (Plate 10). Elsewhere some of the drawing of the tiny Angel Gabriel from the Annunciation on the canopy was exposed by old damage, but the largest area of visible underdrawing is that beneath the transparent red lake of Saint Michael’s mantle (Plate 11). Allowing for the great differences in scale, the short closely spaced strokes of nervous, slightly scratchy hatching, which seek to model the volumes of the drapery folds more than to establish areas of shadow, are comparable with published examples of underdrawings on the Saint Wolfgang panels assigned to Michael Pacher himself rather than to his collaborators.²³ That it was his practice to make highly elaborate underdrawings is confirmed by the exposed drawing in the very damaged fragment showing an episode in the Story of Joseph from the Salzburg Altar (Vienna, Österreichische Galerie).

The relief pattern of the gilded background beyond the arches and also the concentric circles of the haloes were carved into the thickly applied ground, a common technique on South German and Austrian panels of the fifteenth century, but the absolute reverse of the different types of applied relief decorations or the built-up *pastiglia* to be seen in Italian works. The carving of the ground on the little National Gallery panel is notable for its high quality, for the rhythm and flow of the foliate pattern, and for the subtle variation in the different levels of relief (Plate 8). It shares this distinction with similarly ornamented areas on the inner faces of the Saint Wolfgang shutters and the reverses of the Graz panels (Plate 7); indeed, in the great majority of German and Austrian panels decorated in this way, the carving is not truly in relief, for the patterns are made by simply scoring and indenting the designs into the ground.

In the areas of relief decoration, and also the haloes of the Annunciation figures, the gold leaf is

laid over a very dark brown, almost black, gilding preparation, now visible in areas of damage to the gilding. The Saint Wolfgang Altarpiece everywhere has the more usual red-brown or orange bole as a base for gold leaf on both paintings and sculptures,²⁴ as do the Graz panels, but black bole appears to underlie the gilded background of *The Death of the Virgin* (Munich, Alte Pinakothek) from the inner face of the Saint Lawrence shutters.²⁵ It also features on certain works by the Master of Uttenheim with whom Pacher seems to have had a close, if not precisely defined, connection in the earlier part of his career.²⁶

On the National Gallery panel black particles, together with some small opaque red ones, can be seen under magnification. They appear in a matrix which looks brown and translucent but which, on closer examination, seems to contain relatively finely ground colourless material. EDX analysis of a sample identified the major component as calcium carbonate (the colourless particles in the matrix), together with some iron oxide (presumably the red particles) and other siliceous minerals. Since the black particles contain no elements detectable by

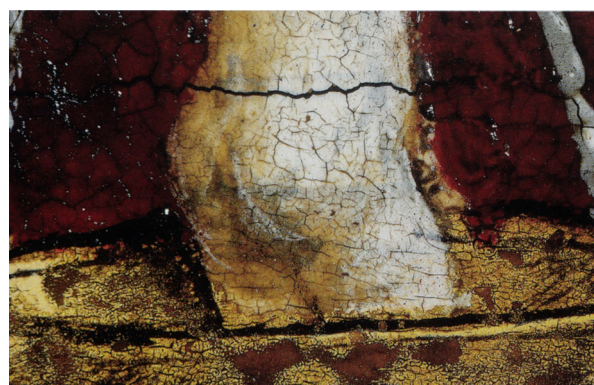


Plate 10 *The Virgin and Child Enthroned with Angels and Saints*. Photomicrograph of the saved soul in the scale pan.

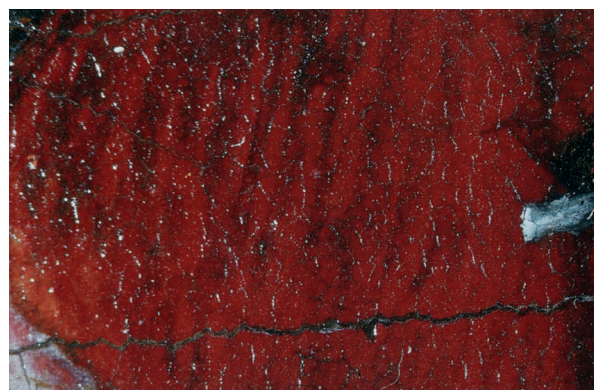


Plate 11 *The Virgin and Child Enthroned with Angels and Saints*. Photomicrograph of Saint Michael’s cloak showing the underdrawing.

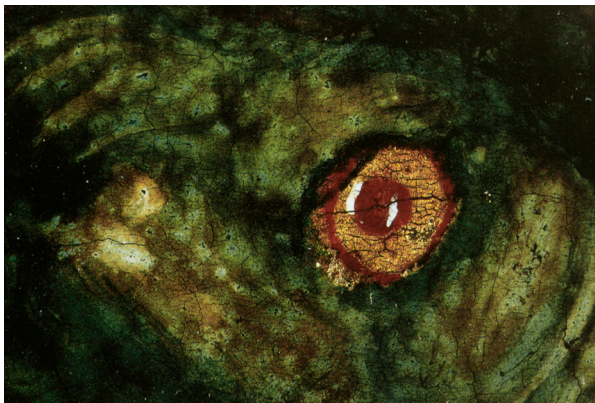


Plate 12 *The Virgin and Child Enthroned with Angels and Saints*. Photomicrograph of the eye of the devil at Saint Michael's feet.

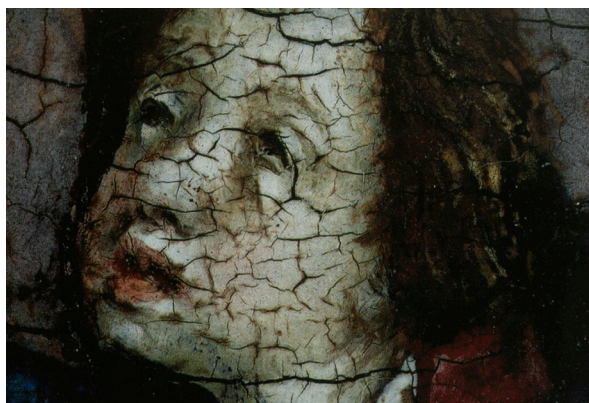


Plate 13 *The Virgin and Child Enthroned with Angels and Saints*. Photomicrograph of the angel offering the rose to the Christ Child.

EDX they would appear to be carbon black.²⁷ Some modern examples of black and brown bole were examined for comparison; they are quite similar in appearance to the bole on the painting, also containing black particles and a few red and yellow iron oxide particles as well as some colourless material. They are not true boles in the sense that they do not contain the clay-like minerals found in Armenian bole, but neither are the red, orange and yellow layers applied as preparations for water-gilding on other Austrian and German paintings.

A black bole may have been chosen to give added depth to the dark gleam of the newly burnished gold, an effect now largely lost with time. As well as deciding between black and red bole, burnished water-gilding and matt oil mordant gilding, Pacher could select several different metal leaves. For the Saint Wolfgang altar gold, silver and the cheaper *Zwischgold* (gold and silver leaf beaten together), were all employed, with the latter used for less important or less visible areas.²⁸ He also exploited the convenient and decorative technique of applied relief brocade for textiles in certain other works, notably the Four Fathers of the Church and Saint Thomas a Becket panels and the sculpted surfaces of the Saint Wolfgang and Gries altars (Plates 2, 4 and 7).²⁹ EDX analysis shows that the only metal leaf on *The Virgin and Child Enthroned with Angels and Saints* is a gold leaf of high purity.³ This was used for the water-gilding of the carved relief decoration and also in combination with an oil mordant for small gilded details such as the ribs of the vaulting, the crozier carried by the bishop saint, the binding of his book, the edge of Saint Michael's cloak, the metal parts of his balance (Plate 10), and, most effectively, for the claws and red-rimmed eyes of the devil (Plate

12). The mordant is unpigmented but appears as a translucent light brown colour where it is visible on the picture surface. The colour appears to be largely the result of darkening of the medium.

The paint film is bound with linseed oil, also reported as the medium of the Saint Wolfgang panels.³¹ Although there is much meticulously executed detail, the paint is thicker and more bodied, especially in the lighter colours, than that to be seen in many Northern European paintings of the fifteenth century. This results in a strong and clear X-ray image. The opacity of the flesh painting, in particular (Plate 13), is reminiscent of the techniques for polychroming faces on sculpted figures. The highlights of the architectural mouldings and tracery form thick, raised ridges, and areas containing a high proportion of lead white sometimes have a slightly wrinkled texture, the result of drying defects in the medium rich paint.³² The lead white paint used to highlight the countless tiny pearls was evidently also thick and viscous; occasionally a trailing thread of paint was formed as the brush was lifted from a pearl (Plate 14).

The opacity of the lighter colours contrasts with the rich intensity of the deeper toned draperies. The azurite used for the Virgin's mantle, and the vaulting of the canopy, is of the high quality often seen on German works, with the pigment coarsely ground to retain the depth of colour of the mineral.³³ Equally sumptuous are the vermilions and red lakes of the Virgin's dress and the cloak of Saint Michael, built up in the shadows with translucent layers of lake through which the drawing can now be seen. However, the most opulent textile is the blue-purple velvet of the bishop saint's cope. Its excellent condition meant that no sample could be taken, but it appears to have been painted with a mixture of azurite, red lake and lead

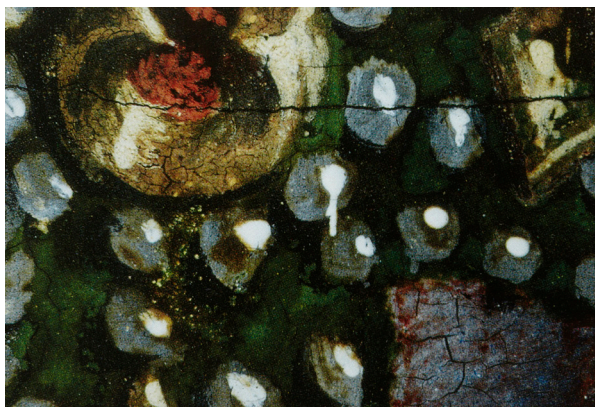


Plate 14 *The Virgin and Child Enthroned with Angels and Saints*. Photomicrograph of the pearls on the cope of the bishop saint.

white, the light on the pile depicted with thin scumbles of the same pigments but with a higher proportion of white.³⁴ The play between red, blue and purple is continued with the Annunciation figures and with the angels; two, diagonally opposite one another, are dressed in a pale greenish blue consisting of azurite and white, and the other two in a softer greyer blue, containing the same pigments but with the addition of red lake. Even the architectural setting belongs in this colour range, its unusual greyish-mauve hue the result of the use of a purple variety of the mineral fluorite (calcium fluoride) mixed with lead white. Some of the more shadowed areas, for example to the right of the bishop saint, have a patchy, slightly blanché appearance. This may be the consequence of increased transparency with time of the paint medium, or perhaps some alteration to the pigment has occurred. The colour and also, in places, the patchiness of certain architectural elements and draperies in the Four Fathers of the Church altarpiece and the dispersed shutters of the Saint Lawrence altar (Plates 4, 5 and 6) indicate the likely presence of fluorite, although it has not yet been identified by analysis of samples.³⁵ Identifications of fluorite made in other laboratories have been mainly on paintings and sculptures from southern Germany and the Alps; for a fuller discussion of this pigment and other occurrences on paintings in the National Gallery, see pp. 20–7 of this *Bulletin*.

Set against these colours are smaller areas of brilliant green: the lining of the bishop saint's cope built up with three layers of verdigris, lead-tin yellow and lead white, and the lighter green of the vanquished devil with a first layer of malachite, probably of natural origin,³⁶ followed by a layer of verdigris with lead-tin yellow and lead white, and finally a thin

and rather unevenly discoloured glaze of verdigris in oil, possibly with a small amount of added resin.³⁷ Patches of this glaze also survive on the rather abraded green marble tiles in the foreground. The other tiles are desaturated variations of the colours of the rest of the picture, with the golden yellow ones (a mixture of lead-tin yellow and yellow ochre)³⁸ perhaps intended to echo the colour of the gold. The only other glazes that are likely to have altered to some extent are those used for the shadows cast by the figures against their niches. A paint sample contained only black, a little azurite and perhaps some fluorite, a combination that would have made a deep purple-black colour. The greenish-brown tinge that the shadows now exhibit is almost certainly the result of discoloration of the large amount of oil added to give them an appropriate translucency. To soften their edges the painter blotted the paint with his thumb or fingertips. Other final touches include the fine black lines that emphasise the sharp junctions between steps and tiled floor and the back of the bishop saint's niche. This black outlining is a distinctive feature of Michael Pacher's larger-scale works, and especially the Four Fathers of the Church altarpiece.

Technical examination can provide no more than confirmation that the techniques and materials used for *The Virgin and Child Enthroned with Angels and Saints* are consistent with the work having been produced in the workshop of Michael Pacher. Its disparity of scale with the great altarpieces means that there will always remain a difficulty in attempting to link them. The practical necessity for workshop assistance in painting the larger works, as well as the requirement for effectiveness over the distance of a church interior, have inevitably affected their style, calling for a homogeneity and also a simplification in painting, which the painter of the small panel had no need to adopt.

However, a more direct comparison can be made with the Saint Thomas a Becket panels in Graz. Although they too have often been considered products of the workshop, they are of an outstanding quality, as a recent cleaning has revealed. As narrative scenes on altarpiece shutters they are more easily related to larger examples of Pacher's painting, and especially the Saint Lawrence panels and the outer sides of the Four Fathers of the Church altar. They share with those works the same spatial organisation, dramatically and ingeniously lit, in particular the scene of the funeral of the saint where two different light sources are implied. The interplay of a relatively limited palette of colours, mainly different shades of red, pink and purple set against a brilliant green, is also typical. The figure types, their animation and



Plate 15 *The Assassination of Saint Thomas a Becket.* Detail.



Plate 16 *The Virgin and Child Enthroned with Angels and Saints.* Detail.

the way that they engage with one another, also have their equivalents in the larger works. The quality of the carving of the gilded backgrounds of the symbols of the Evangelists on the reverses has already been commented upon, and the painting of the lion's mane, with its sculpturally structured curls, can be compared with the hair and beards of the panels of Saint Peter and Saint Paul, originally shutters to the *Sarg* of the Saint Lawrence altar (now Vienna, Österreichische Galerie), or with the hair of the king who kneels before Saint Gregory in the Four Fathers of the Church altarpiece.

The Saint Thomas a Becket panels are also exquisitely refined in their detail and in the handling of the paint. The individualised heads are shown with tiny eyelashes and facial warts, also to be seen on some of the more grotesque heads in the Saint Lawrence shutters; and the artist has even observed how the stitching of the surplice has been pulled by the raised arm of the cleric at the centre of the funeral scene. Other details confirm that the painter of the Graz panels must also have painted *The Virgin and Child*

Enthroned with Angels and Saints: for example, the tiny hands and feet of the flying angels are depicted in exactly the same way as those of the angels and the Annunciation group in the London picture. There are no borders studded with tiny pearls – small pieces of applied relief brocade have been fixed to the surface instead – but the chainmail of the knight who murders the saint is highlighted with white flicks and dots in an identical manner to that employed on the figure of Saint Michael (Plates 15 and 16).

If the Graz panels represent Pacher working on a small scale at about the time he painted the Saint Lawrence shutters, then it is probably correct to consider the London picture in a similar relation to the Four Fathers of the Church altarpiece, and therefore probably dating from later in the 1470s.³⁹ In any case, it is clear that this is the work of a mature artist: there is nothing tentative or unresolved in the design or execution of this highly accomplished and sophisticated painting. It is a superbly crafted object, full of delicate and sometimes humorous detail, such as the devils in the scale pan and the disappointed angel whose



Plates 17 and 18 *The Virgin and Child Enthroned with Angels and Saints*. Photomicrographs of the devils in the scale pan.

offering appears to have been rejected by the Christ Child (Plates 13, 17 and 18). It is clearly not a routine workshop product. Both the quality of execution and the intelligence behind its conception argue for it being the work of Michael Pacher himself.

Acknowledgements

Given the rarity of works from the Tyrol in this country, we have depended greatly on the expertise of those with more experience of works of this type. No study of Pacher's technique would be complete without reference to the contribution of Dr Manfred Koller and we are grateful to him for helpful discussion of our painting. At the Bundesdenkmalamt, Vienna, we would also like to thank Dr Hubert Paschinger and Dr Helmut Richard; and at the Akademie für Bildenkunst, Professor Franz Mairinger. In Munich, Dr Andreas Burmester of the Doerner Institute was very generous with his time. At the Joanneum, Graz, we would particularly like to thank the Director, Dr Gottfried Biedermann, and his staff for making their panels available to us for detailed inspection.

Notes and References

- 1 According to information in the Gallery Dossier, the painting was said to have been acquired by the donor's father, George Simonson, from a family collection in Rovereto (south of Trento) in about 1913–14.
- 2 Exhibited Burlington Fine Arts Club 1932–3, No. 29, as by Pacher.
- 3 C. Gould ('A note on a Pacher-esque addition to the National Gallery', *Burlington Magazine*, 93, 1951, pp. 389–90) set out the relationship with the documented carved works and with the paintings of the Four Fathers of the Church in Munich, describing the National Gallery painting as 'a microcosm of Michael Pacher's works both in painting, and sculpture'. N. Rasmus (*Michael Pacher*, Munich 1969) and E. Egg

(*Gotik in Tirol, die Flügelaltäre*, Innsbruck 1985, pp. 189 and 193) attributed the National Gallery painting to Hans Pacher, Michael Pacher's son, but there are no documented works by Hans. V. Oberhammer ('Zu Pachers St. Michael Altar für die Pfarrkirche in Bozen', *Wiener Jahrbuch für Kunstgeschichte*, XXV, 1972, pp. 54–176) attributed the painting to Michael Pacher, an opinion shared by G. Bonsanti ('Michael Pacher in Lombardia' in M.T. Balboni Brizza, ed., *Quaderno di Studi sull'Arte Lombarda dai Visconti agli Sforza*, Museo Poldi Pezzoli, Milan 1990, pp. 20–2).

- 4 *Michael Pacher und sein Kreis/Michael Pacher e la sua cerchia*, exh. cat., Abbey of Neustift/Novacella, July–October 1998, Bolzano 1998, no. 29, pp. 200–2.
- 5 His lack of attributes other than his book and crozier makes him difficult to identify. Oberhammer (cited in note 3) suggests that he might be Saint Martin, who is sometimes depicted as a bishop with book and crozier alone. It is also conceivable that he might be one of the two bishop saints of Brixen, Albuin and Ingenuin, though they are usually paired.
- 6 Rasmus (cited in note 3, pp. 181, 235) drew attention to a seventeenth-century document concerning an altarpiece with wooden sculpture and shutters in the parish church at Bolzano, which stood on the altar dedicated to Saint Michael. The altarpiece showed the Virgin with Saints Michael and Martin. Since payments from 1481–4 exist to Pacher for a Saint Michael altarpiece, Oberhammer (cited in note 3, p. 160) suggests that the National Gallery picture was made as a 'Modell' for this altarpiece, and Egg (cited in note 3) that it was a reflection of the finished altarpiece by Pacher's son, Hans.
- 7 For differing opinions about the panels in Graz see Rasmus, cited in note 3, pp. 16–24, and *Michael Pacher und sein Kreis*, cited in note 4, p. 178. Few smaller scale works are associated with the Pacher workshop: among those in the 1998 exhibition were an *Annunciate Angel* (cat. 32) and a *Saint Barbara* (cat. 34), and there is also a *Saint Sebastian* in Innsbruck (Ferdinandeum), but none of these is comparable with the National Gallery panel. In 1860 a *Man of Sorrows*, presumably not large and apparently signed and dated 1465, was to be seen in the chapel of a castle near Bolzano (see Rasmus, p. 57).

- 8 M. Baxandall (*The Limewood Sculptors of Renaissance Germany*, New Haven and London 1980, p. 253) has an incisive passage on the type of workshop Pacher ran and his role as painter and designer of sculpture. The followers and associates of Pacher, to whom the National Gallery picture has sometimes been assigned, are an ill-documented group. There are no documented works by Hans Pacher, Pacher's son, and there is little agreement that the works attributed to him are by a single artist. Friedrich Pacher is a shadowy figure whose family and working relationship with Michael is unclear, but who seems to have worked at Neustift; a group of paintings has been associated with his name, but without a documented basis. The group of works attributed to the Master of Uttenheim, who appears also to have worked at Neustift, is based on the painting of the Virgin and Child with saints in Vienna, formerly in Uttenheim; although it is sometimes argued that the Master is a painter of an earlier generation than Pacher who influenced him, the impact of specific works by Pacher on those by the Master of Uttenheim seems clear (see J. Shoaf Turner, ed., *The Dictionary of Art*, London 1996, Vol. 20, p. 779).
- 9 The painting was cleaned and restored by Sebastian Isepp. Photographs and a report are in the National Gallery Conservation Record.
- 10 This observation was confirmed by recent analysis by FTIR of a sample of the old coating that had accumulated in a flake loss. The analysis (by Jennifer Pilc) found mainly animal glue and polysaccharides (perhaps from gums), but none of the usual varnish materials.
- 11 For the cleaning in 1949 ammonia in turpentine was used to remove the discoloured coating and dirt layers. In the recent cleaning propan-2-ol was used to dissolve the soft resin varnish applied after that restoration. The uneven residues left by the previous cleaning could be broken up and partly removed with dilute ammonia applied on very small cotton wool swabs; the rest was removed mechanically. No cleaning was attempted on areas of green where the discoloured copper green glazes were already rather broken up. The painting was then given a preliminary varnish of 'Regalrez 1094' in Fluka solvent, which provided good saturation with a very thin application. The losses were retouched with pigments in 'Paraloid B-72' and the final sprayed varnish was of dammar in Fluka solvent.
- 12 The identification of the wood was made by Dr Peter Klein. The support was incorrectly reported as silver fir (*Abies alba*) in M. Levey, *The German School*, National Gallery Catalogues, London 1959, p. 99.
- 13 M. Koller and R. Prandstetten, 'Hölzer, Holzbearbeitung und Holzkonstruktion' in M. Koller and N. Wibiral, *Der Pacher-Altar in St. Wolfgang, Untersuchung, Konservierung und Restaurierung 1969–1976*, Vienna, Cologne and Graz 1981, p. 116.
- 14 *Michael Pacher und sein Kreis*, cited in note 4, pp. 182–93 and 206. Associates of Pacher such as the Master of Uttenheim, Friedrich Pacher and Marx Reichlich also painted on panels of stone pine.
- 15 For example the fir panel of the fragment by Wolf Huber (NG 6550) illustrated in L. Campbell, S. Foister and A. Roy, eds., 'Wolf Huber's "Christ taking Leave of his Mother"', *National Gallery Technical Bulletin*, 18, 1997, p. 100.
- 16 We are grateful to Professor Franz Mairinger for showing us the X-radiographs of the panels made at the Akademie der bildenden Künste, Vienna. The panel of the very damaged fragment of *Joseph thrown in the Fountain* from the Salzburg Altar, now in the Österreichische Galerie, Vienna, seems to have been scored all over with a tool, perhaps a claw chisel, to roughen the surface and to improve the adhesion of the ground.
- 17 This was incorrectly reported as gesso in Campbell, Foister and Roy, cited in note 15, p. 22. The sample (taken from the edge) must have comprised later filling material.
- 18 F. Mairinger, G. Kerber and W. Hübner, 'Analytische Untersuchungen der Gemälde' in Koller and Wibiral, cited in note 13, pp. 146–9.
- 19 For diagrams of the frame mouldings and construction see Koller and Wibiral, cited in note 13, p. 121.
- 20 Examples in the National Gallery of fifteenth-century small devotional panels from Italy with decorated backs that seem never to have been part of an ensemble include *Saint Dorothy and the Infant Christ* (NG 1682), attributed to an associate of Francesco di Giorgio (the reverse is reproduced in L. Belloso, ed., *Francesco di Giorgio e il Rinascimento a Siena 1450–1500*, exh. cat., Sant' Agostino and Pinacoteca Nazionale, Siena 1993, p. 120) and *The Dead Christ supported by Saints* (NG 590) by Marco Zoppo (illustrated in J. Dunkerton, S. Foister, D. Gordon and N. Penny, *Giotto to Dürer. Early Renaissance Painting in the National Gallery*, New Haven and London 1991, p. 85). They seem to have been less common among South German and Austrian works, although the reverse of Dürer's small panel of *Saint Jerome* (NG 6563) in the National Gallery, with its decorative starburst of a heavenly body, complete with spattering, might almost qualify.
- 21 See M. Koller, *Der Flügelaltar von Michael Pacher in St. Wolfgang*, Vienna, Cologne and Weimar 1998, pp. 71–5, and also M. Koller, 'Über die Entstehung der Flügelaltäre in der Pacher-Werkstätte' in *Michael Pacher und sein Kreis*, cited in note 4, p. 78.
- 22 No drawing could be detected by infra-red photography or by infra-red reflectography. It has sometimes been possible to show that underdrawings that are visible with the naked eye but are transparent to infra-red have been executed with an iron-gall ink but the good condition of the painting meant that no sample of the drawing material could be taken. On the little panels in Graz underdrawing can be seen in infra-red photographs and with the naked eye in areas painted with red lake, but none can be detected under the other colours. The character of this underdrawing, with more widely spaced hatched strokes than in the National Gallery picture, is a small-scale version of that to be seen on some of the Saint Lawrence panels.

- 23 See Koller in *Michael Pacher und sein Kreis*, cited in note 4, p. 79, fig. 10, and Koller, cited in note 22, pp. 89–96, including infra-red images of *The Martyrdom of Saint Cosmas* by Friedrich Pacher and a *Saint Sebastian*, sometimes given to the putative Hans Pacher (both in Innsbruck, Ferdinandeum). These reveal less carefully shaded and, in the case of the *Saint Sebastian*, almost scribbled, hatching. An underdrawing by Marx Reichlich, on the other hand, is precisely modelled but in a rather rigid and mechanical way.
- 24 Mairinger, Kerber and Hübner in Koller and Wibiral, cited in note 13, p. 149.
- 25 The gilding has not been sampled but the colour of the bole can be observed in areas of damage.
- 26 So-called black boles seem first to occur on paintings and sculpture of the late fourteenth and early fifteenth century that appear to originate from Bohemia. They then sometimes, but by no means often, feature on works of the first half of the fifteenth century from Austria and South Germany (including a sculpted *Virgin and Child* now in the Bayerisches Nationalmuseum, Munich, by Hans Multscher who was later to make an altarpiece for Sterzing/Vipiteno, near Pacher's hometown of Brauneck/Brunico). Manfred Koller has indicated (in discussion with the authors) that black boles seem to have gone out of use in the second half of the century. The black bole on the panels associated with Pacher would therefore appear to be relatively late occurrences.
- 27 The major peak in an EDX spectrum of this layer was Ca, with smaller amounts of Fe, Si, Al and trace amounts of S and Ti. The very small amount of Ti seen in the EDX spectrum was located in a few small yellow particles, commonly found in natural earth pigments. FTIR suggests that the 'bole' layer has a proteinaceous medium, probably animal-skin glue.
- 28 K. Groen and J.A. Mosk, 'Farbenanalytische Untersuchungen der Polychromie' in Koller and Wibiral, cited in note 13, p. 138.
- 29 For the applied relief brocades on the Gries altar see Koller in *Michael Pacher und sein Kreis*, cited in note 4, p. 76–7.
- 30 It contains a barely perceptible amount of silver, found in varying quantities in all natural deposits of gold.
- 31 Mairinger, Kerber and Hübner in Koller and Wibiral, cited in note 13, pp. 150–3. GC–MS analysis was carried out by Raymond White on two samples from the National Gallery panel. A white highlight from the mouldings of the canopy was found to contain partially heat-bodied linseed oil, and a sample of green paint from one of the floor tiles contained linseed oil (not heat-bodied) with a small amount of pine resin.
- 32 Relatively thick paints, rich in medium but retaining the mark of the brush, can be observed on many of the works assigned to Pacher. Highlights on areas of flesh painting, in particular, have a distinctive almost stringy texture.
- 33 The Virgin's mantle was not sampled, but the use of azurite could be deduced by its appearance under high magnification and by its characteristic darkness in infra-red photographs.
- 34 Again this area was too well preserved for the taking of a sample, but the pigment mixture could be distinguished by examination of the paint surface with a stereomicroscope.
- 35 A few samples have been taken by the Doerner Institute from the Saint Lawrence panels but not from areas of purple.
- 36 The relatively finely ground malachite appears as rounded agglomerates, but around the green pigment are some colourless minerals (quartz and other silicates). These indicate that the malachite is most likely to be of natural origin despite the rounded shape of some of the particles.
- 37 A scraping taken for FTIR analysis seemed to contain mainly oil and verdigris, even in more browned areas. A trace of resin was also detected, and there was some evidence for copper-resin interaction.
- 38 XRD analysis showed it to be lead-tin yellow 'type I'. Lead-tin yellow 'type II' has been found on the Saint Wolfgang altar (see Mairinger, Kerber and Hübner in Koller and Wibiral, cited in note 13, p. 151).
- 39 As well as the diversity of opinion in the attribution of the National Gallery painting, there has been a range of speculative suggestions for its dating, from the earlier years of Pacher's career, to the last decade of his activity, the 1490s: see, for example, G. Bonsanti, cited in note 3, pp. 20–2. He argues that the pose of the Child in the National Gallery panel, and also that in an altarpiece by Friedrich Herlin of 1488, both derive from Foppa's *Pala Bottigella* (Pavia, Museo Malaspina), usually dated to the early 1480s. However, the resemblances are no more than general and it seems just as likely that the pose of the Pacher Child has its origins in sculpted figures.