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Ercole de' Roberti's 'The Last Supper'

Jill Dunkerton and Alistair Smith

Examination, treatment and technique

Jill Dunkerton

Before the recent cleaning and panel treatment of *The Last Supper* by Ercole de' Roberti (No.1127) (Fig.1 and Plate 4, p.38) infra-red photography and X-radiography were undertaken to help assess the condition of the painting. The results of both (Figs.2 and 3) confirmed that the clumsy and discoloured restoration across the lower part of the left-hand figure, the tablecloth and parts of the floor was covering large areas of damage where the paint and ground had flaked away. However, the X-radiograph also revealed that near the left edge, a key-hole had been cut into the panel, while on the right edge two white, rectangular shapes can be seen. These are where the wood had been cut away, presumably for the fitting of hinges, and then later filled with an X-ray opaque putty. The key-hole and hinges, which must be connected with the panel's use as a tabernacle door (see p.37), could not be seen from the back of the panel because they were covered by the members of a cradle applied to the panel in 1883 (Fig.4) [1]. All the sliding members of this cradle were jammed [2] severely restricting the movement of the thin and fragile panel and causing it to take up a slight warp concave to the picture surface. The cracks running in from the left edge along the grain of the wood may also have been due to the constriction of the panel by the cradle.

More details related to the possible earlier function of the panel were uncovered during the cleaning (Figs.5 and 6). This involved the removal of the spectacularly discoloured varnish, the darkened retouchings and most of the crumbling and flaking putty fillings [3]. Some of this old restoration covered undamaged, original paint. In the area of the hinges the wood appears to have been cut away completely, but some of the paint and ground has survived, particularly over the upper hinge. The putty around the borders of the panel was removed, revealing that the edges of the original gesso ground have the characteristic raised lip found on paintings which are thought originally to have been framed by a wooden moulding fitted to the panel before the application of the ground, and then prepared with gesso at the same time as the painting surface.

Although there was some damage and paint loss in the area over the key-hole, the paint and ground have not actually been cut out. After removal of the cradle (Fig.7) it could be seen that the key-hole had been plugged with pieces of wood; the upper, circular part with a wood apparently different to that of the main panel (identified as poplar) and the lower part with a piece of wood similar in appearance to that of the rest of the panel. It had become equally worm-eaten and had been filled with the same

putty as the other worm channels. If the panel was originally a tabernacle door it makes no sense for the lock and key-hole to have been fitted onto the back of the panel. A possible explanation for the odd position of the key-hole is that it was cut out of the wood before the application of the paint and ground and that when it was discovered to be in the wrong place, or found to be redundant for some other reason, it was filled in and the repair covered with gesso together with the rest of the surface of the panel. The damage and disruption to the paint and ground in this area have probably been caused by the different reactions to changes in humidity of the small pieces of wood used to fill the hole.

It was decided that the panel, although thin and fragile, was sufficiently strong not to need building up at the back with balsa wood and wax-resin, a treatment which would have obscured the interesting features on the back of the panel. Instead it was placed in a supporting panel tray, cushioned to accommodate the pronounced convex warp which the panel developed on removal of the cradle [4]. The degree of warp, which would have been visually disturbing on a larger panel, was perfectly acceptable on such a small painting. The change from a concave to a convex warp shows how much tension and constraint the panel must have been under when it was still cradled.

Before the painting was restored a few samples were taken from the edges of the losses for identification of the paint medium and of some of the pigments [5]. The medium of two samples, from the white tablecloth and from the purple-brown coloured band along the bottom edge, was analysed by gas-chromatography and was found to be egg tempera [6]. The pigment mixture of the same purple-brown strip consists of lead white, vermilion and a black pigment applied in a single layer over the gesso ground. The black pigment appears to be a vegetable black, but most of the particles are rather rounded in shape without the characteristic long splinters of wood charcoal [7]. A sample from one of the lighter, pinkish brown floor tiles contained the same pigment mixture, but with a higher proportion of lead white.

As the figures are on such a small scale and are mostly in excellent condition, the only cross-section made from the draperies was of the dark, turquoise blue robe worn by Judas (on the far right). This shows a single layer of natural azurite over a very thin, light coloured underpaint of lead white with a few particles of charcoal black. The underpaint accounts for the light appearance of this area in the X-radiograph (Fig.3). In the interstices between the rather large mineral particles of the azurite in the upper layer is some brown translucent material. This may be darkened paint medium, which suggests that the robe has probably discoloured to some extent since it was first painted. There may also be a thin layer of underdrawing here, but it is difficult to distinguish this from the under-

paint because of the extreme thinness of the sample. A few faint lines that appear to be underdrawing can be seen by infra-red photography and reflectography in the pale yellow robe of S. John (seated to the right of Christ) and in the pale pink tunic of the Apostle third from the right (Fig.2). However, it is difficult to separate the lines and hatching of possible underdrawing from Ercole's very precise linear definition of the forms and drapery folds in the upper paint layers.

Although no paint sample could be taken, the dark appearance of Christ's blue robe in the infra-red photograph (Fig.2) suggests that it too must have been painted with azurite and then highlighted with 'shell-gold' (also used for the relief in the lunette above Christ's head) [8]. It seems unlikely that Ercole, operating mainly in Ferrara, was unable to obtain plentiful supplies of natural ultramarine, so the choice of the less costly pigment, azurite for the blue robes, must have been deliberate, contributing to the rather unusual tonality of the painting. The use of a rich, greenish blue (almost certainly azurite) is also a

marked feature of *The Israelites Gathering Manna* (No.1217), a presumed pendant to *The Last Supper*.

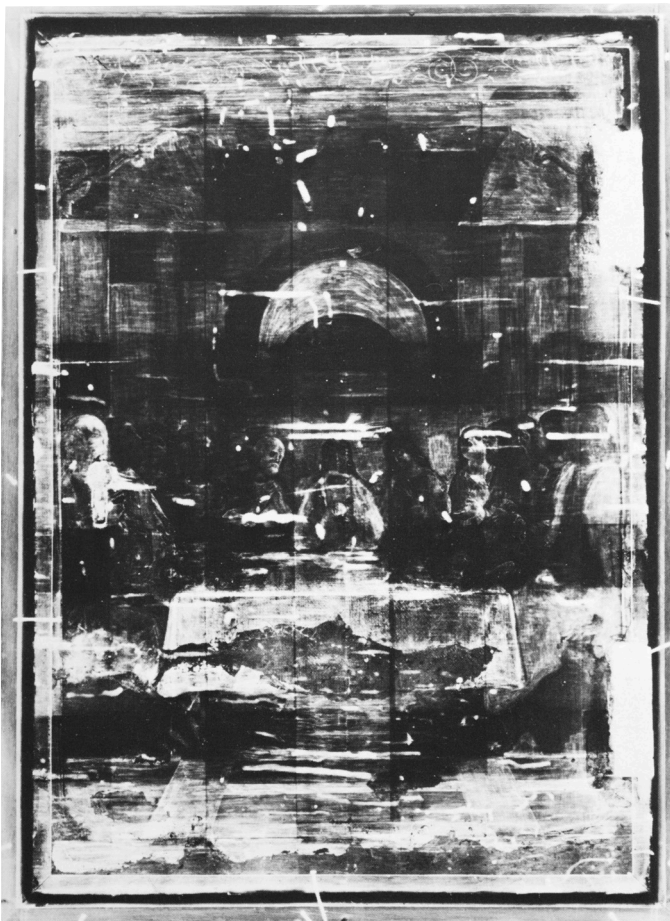
The restoration [9] of *The Last Supper* was necessarily fairly extensive because of the size of the losses relative to the small dimensions of the panel. The large losses on the floor, across the left-hand figure and in the tablecloth were particularly disturbing as they disrupted the carefully designed and lit perspective recession which focuses the composition on Christ and the critical act of blessing the Host. The extreme delicacy of Ercole's technique also had to be taken into account when deciding on an approach to the restoration. It was agreed that any clearly visible form of restoration would distract too much from the refinement of both composition and technique, so a more or less complete reconstruction of the missing areas has been attempted. The restoration of the losses on the floor, the tablecloth and over the damage caused by the lower hinge did not present many problems, the symmetry of the design providing obvious solutions to the replacement of lost paint. Fortunately small fragments of red paint have



Figure 1 (left)
Ercole de'Roberti,
The Last Supper
(No.1127),
panel 31.1 × 22.5 cm.,
painted surface
29.6 × 21.3 cm.,
before treatment.

Figure 2 (right, top)
Infra-red photograph
before cleaning.

Figure 3 (right, bottom)
X-radiograph of the
picture before
treatment.



survived beneath the band of damage across the left-hand figure. This made it possible to reconstruct the small fold of drapery hanging over the end of the bench and to re-establish the outline of the curve of drapery running from this fold to the back of the figure's lower leg. Fine, hatched brushstrokes of black paint were also taken to represent the remains of a shadow cast by the edge of the robe onto the brown paint of the bench. Originally there would probably have been some more clearly defined internal folds in this damaged section of drapery, but clearly these could not be invented. Instead, they have been implied by the use for the retouching of a cross-hatched shading technique which resembles that which can be seen in some of the undamaged original paint. A similar hatched application of the paint has been used to restore the damage caused by the fitting of the upper hinge; but the griffon design, which must have echoed the corresponding piece of the frieze on the opposite side, was not reconstructed since its absence does not distract from the quality and content of the areas of well-preserved original paint which make up by far the greater part of the painting.

Notes and references

1. The cradle was applied by William Morrill. According to the bill submitted for the work he also treated some loose paint, planed down the panel and filled the worm-holes. The painting had been acquired the previous year when it was treated by William Dyer. His bill records the removal of 'oil from the surface and repair of damages in several places'.
2. When the cradle came to be removed it was discovered that the glue used to attach the fixed, horizontal members to the back of the panel had been over-generously applied so that the excess had seeped out, sticking down the vertical, sliding members as well. Therefore the cradle can never have functioned as intended.
3. The discoloured varnish and some of the retouchings were removed with propanone (acetone). Most of the old restoration was quite hard and had to be removed mechanically with a scalpel. Occasionally, in areas where it was thinner, it could be removed using dilute aqueous ammonia. The old putty fillings had been loose and flaking for many years; an attempt was made to secure them in 1930.
4. For the construction of panel trays see BROUGH, J. and DUNKERTON, J., 'The Construction of Panel Trays for Two Paintings by the Master of Cappenberg', *National Gallery Technical Bulletin*, 8 (1984), pp.67-70. Since that article was written a few modifications to the design have been made. Polyethylene foam is now also used to make the shaped slips placed between the front edge of the painting and the rebate of the tray. This replaces the balsa wood which was felt to be insufficiently compressible. If the panel is very sensitive to changes in relative humidity, as in the case of *The Last Supper*, the dimension of the tray which is at right angles to the direction of the grain of the panel is increased to allow for the fitting of strips of polyethylene foam along the side walls of the tray. These strips will compress if the panel flattens out and lengthens because of an increase in the relative humidity. The foam now used is 'Plastazote', a low density (24 kg/m³) polyethylene foam manufactured by BXL Plastics Ltd, ERP



Figure 4 (*above*) Back of the panel before removal of the cradle.



Figure 5 (*above, right*) The picture during cleaning.



Figure 6 (*right*) The picture after cleaning, before restoration.



Figure 7
Back of the panel after removal of the cradle.

Division, Mitcham Road, Croydon, Surrey CR9 3AL available in the UK from Wilford Polyformes Ltd, Greaves Way, Stanbridge Road, Leighton Buzzard, Bedfordshire LU7 8UB.

5. The identification of the pigments and of the wood species was made by Ashok Roy.

6. MILLS, J. S. and WHITE, R., 'Analyses of Paint Media', *National Gallery Technical Bulletin*, 9 (1985), p.71.

7. For another example of this form of black, see p.17.

8. The yellow drapery of the Apostle third from the left was examined under high magnification because it has a slightly sparkling appearance which suggested that it might possibly be mosaic gold (stannic sulphide), which so far has been identified on only one painting in the National Gallery: 'S. Vincent Ferrer' by Cossa (No.597), also from Ferrara. See SMITH, A., REEVE, A. and ROY, A., 'Francesco del Cossa's "S. Vincent Ferrer"', *National Gallery Technical Bulletin*, 5 (1981), p.44, Plate 13 and pp.55–6.

9. The painting was restored using pigments in Paraloid B72 and varnished with Ketone N. The losses had previously been refilled with a putty made from chalk (slightly pigmented with earth colours), gelatine and a little stand oil.

Art-historical results

Alistair Smith

The treatment of this painting has produced two results which are of interest to the art historian. One concerns the question of authorship and is of importance since, in the past, *The Last Supper* has received varying attributions.

Throughout most of the nineteenth century it bore the name 'Masaccio', an attribution which has not been sustained by modern scholars. Upon entering the Gallery in 1881, it was described as being of the 'North Italian School, 15th century', and was displayed in the room devoted to paintings from Bologna and Ferrara. In 1891, Frizzoni considered its location apt and commented on the sagacity of the attribution since the painting was clearly by an artist 'di povero ingegno' and thus was not attributable to Ercole, 'as some people might suppose'. Not everyone was in agreement with this view and when the painting was last classified in a National Gallery *Catalogue* (in 1961), something of these varied opinions was reflected [1].

While cagily describing it as no more than 'Ascribed to Ercole de' Roberti', Davies appended a long footnote on the provenance in which he tended to accept the idea that the painting was once associated with *The Israelites Gathering Manna* (No.1217), which he accepted as autograph.

The cleaning of the painting has done much to emphasize the high quality of the execution and to reveal other qualities typical of Ercole. While very small, the design exhibits Ercole's characteristic grandeur. The strong focused light, tight architectural detail and distinctive physiognomy result in the kind of tense drama on a miniature scale that is the hallmark of Ercole. It is now surely possible to consider upgrading the attribution.

The second revelation for the art historian results from the X-radiograph (Fig.3) which was made as part of the examination of the painting prior to treatment. It shows that the painting was at one time fitted with a key-hole and hinges. The evidence of the X-radiograph was further confirmed when the reverse was revealed by the removal of the cradle (Fig.7). It follows, then, that the painting was prepared for use as a door. While it could have formed part of a piece of furniture (for example, a cupboard for storing church materials), its probable association with two paintings of predella dimensions would seem to indicate that it was designed to function as door to a tabernacle for the Host — indeed it was described as such when sold in 1811 [2]. Thus it should be imagined as subtending an altar panel, flanked by a scene showing *Abraham and Melchizedek* (whereabouts unknown) and *The Israelites Gathering Manna* (No.1217), a view first put forward by Zeri in 1959 and now seen to be more probable thanks to the recent technical examination [3].

Notes and references

1. DAVIES, M., *The Earlier Italian Schools*, National Gallery Catalogues (London 1961), pp.460–62.
2. W.Y. Ottley Sale, 25 May 1811 (lot 31, as 'Masaccio').
3. Zeri published his suggested reconstruction of the predella in *Bolletino d'Arte* (1965), pp.77–8. Joseph Manca provides a candidate for the main altar panel in *The Burlington Magazine*, CXXVII, 989 (1985), pp.521–22.



Plate 4 Ercole de' Roberti, *The Last Supper* (No. 1127), after cleaning and restoration.



Plate 3 Wright of Derby, *Mr and Mrs Collman* (No. 6496), after cleaning and restoration.