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## Wright of Derby's 'Mr and Mrs Coltman': An Unlined English Painting

Martin Wyld and David Thomas



Figure 1 Wright of Derby, Mr and Mrs Coltman (No.6496), canvas, 1.270 m. × 1.016 m., before treatment.

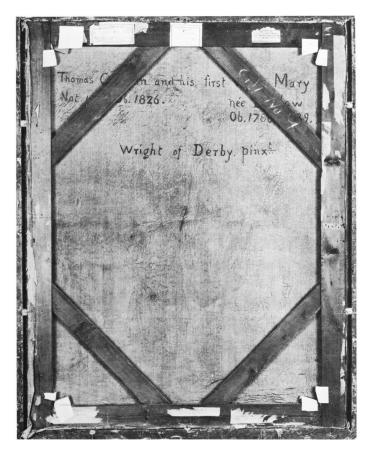


Figure 2 The back of the picture before treatment. The stretcher is not the original one.



Figure 3 The back of the canvas showing the marks left by the original, narrower stretcher.

The acquisition of Wright of Derby's Mr and Mrs Coltman (No.6496, 1.270 m. × 1.016 m.; Fig.1 and Plate 3, p.38) in 1984 added to the National Gallery Collection an exceptionally well-preserved English painting of the early 1770s [1,2]. Joseph Wright's double portrait had remained in the possession of Thomas Coltman's descendants until its sale in 1984, and is one of the few pictures of its date which has never been lined. Close examination of the picture before the sale revealed that, though obscured by an uneven varnish, it had suffered from no accidental damage or wearing, and had lost only a few minute flakes of paint. The overwhelming impression was of a picture whose appearance had not been altered by the interventions of

The rarity of unlined paintings can be illustrated by the fact that, of approximately seven hundred canvas paintings in the National Gallery Collection which pre-date the year 1800, only three others are unlined. The earliest of these is Moroni's Canon Ludovico di Terzi (No.1024) [3]; the other two are from the seventeenth century: Velazquez's Philip IV of Spain in Brown and Silver (No.1129) and Voet's Cardinal Carlo Cerri (No.174). The Moroni and Voet portraits are thinly painted, and the surface texture and appearance of their paint does not differ significantly from some lined pictures by the same artists. Awareness of the serious and irreversible effects of lining has led to Velazquez's portrait of Philip IV becoming a famous example of an unlined picture; the vigorous and controlled use of impasto in the costume contributes considerably to the effect, and the impasto would certainly have been crushed had the picture ever been lined by traditional methods. Some modern methods of lining can be even more damaging.

Wright's use of very thickly textured paint, perhaps applied with a palette knife, on the trunk of the birch tree above Mrs Coltman is remarkably free for the date at which the picture was painted. The use of thinner and more finely applied impasto elsewhere in the landscape and in the Coltmans's costumes conveys an impression of light and of the many different textures of both the landscape and of the feathers, gold and silver braid, lace, buckskin and the variety of fine fabrics of the riding clothes. As with Philip IV in Brown and Silver, traditional lining methods would have at least partly destroyed these painterly effects.

The condition of the canvas was as good as could be hoped for: inevitably, it had become acidic and brittle, though not dangerously so. The canvas was buckled at the edges, and two sets of stretcher marks, caused by slackened canvas resting against the stretcher bars, were visible. It appeared that the original stretcher had been a simple rectangular construction of four members each about 4.5 cm. wide, with no crossbars or diagonals. The top and bottom members and the four diagonal corner bars of the stretcher visible in Fig.2 had left pronounced marks on the front of the picture. The inscription on the back of the canvas (Fig.3) may have been added while the picture was still on its original stretcher; the date of this inscription not before 1826 — may indicate when the stretcher was replaced.

Mr and Mrs Coltman was exhibited at the National Gallery for three months following its acquisition in November 1984, and was then withdrawn from exhibition for cleaning and conservation treatment. The surface dirt and varnish, which in places were smeared as if an

earlier attempt at cleaning had been made, were easily removed, revealing paint in excellent condition (Fig.4). Cleaning showed that there had been a colour change in the sky: a strip of paint along the top edge which had been protected by the rebate was bluer than the remainder. Microscopical examination of samples identified the pigments of the sky as lead white, vermilion, smalt and charcoal. The smalt in the exposed area had degraded and partially lost its colour, leaving the vermilion in the sky more prominent than it had been originally, whilst beneath the rebate the smalt was relatively undiscoloured. Neither the X-radiograph (Fig.5) nor infra-red photography showed the extent of the changes in the composition except for some minor alteration in the position of the house at the right edge, in Thomas Coltman's left arm and in the horse's ears. Cracks in the top layer of paint suggested that foliage had once covered much of the sky on the right, and that a broad tree trunk had originally been placed to the left of the horse's legs.

After cleaning, the picture was removed from the stretcher, uncovering an as yet unexplained hieroglyphic at the top left (Fig.3). The canvas, though fragile, was strong enough to support the picture, and was in need of treatment only to reduce the stretcher marks, the buckling at the edges and also some cupping of the paint. This was achieved by first damping and flattening the turnover creases, and then by the use of the low-pressure table [4].

The elimination of cupping, buckling and stretcher marks on canvas paintings by vapour treatment on a vacuum hot-table is an established technique [3,5,6] and this form of treatment has been used as a preparation for lining. The low-pressure table is more effective and controllable than the hot-table in the use of moisture to regenerate the size and to relax the canvas so that various types of surface deformation can be corrected. Mr and Mrs Coltman was laid face-up on the low-pressure table with a sheet of perforated aluminium underneath and Melinex on top. The table's edge and main heater were set at 30°C and the table evacuated to 15 mbar (1.5 kPa). When the table had reached the set temperature, humidification was switched on for 15 minutes. After a further 15 minutes the heaters were switched off and the painting was dried at a vacuum pressure of 25 mbar (2.5 kPa) for three hours.

The humidification eliminated the stretcher marks, and the most pronounced cupping was considerably reduced by the end of the drying. This form of treatment, which was highly effective on Wright's unlined picture, will be the subject of an article in a future issue of this *Bulletin*.

The top edge of the picture had insufficient turnover to be re-stretched, and was strip-lined with Terylene (Dacron) net using Beva 371 as an adhesive. The strip-lining was attached to the turnover only. The picture was now ready to be re-stretched. To protect the unlined canvas from accidental damage, a blind stretcher was made. Seasoned pine of 90 mm. × 20 mm. section was used to make a conventional keyed stretcher with horizontal and vertical half-lapped crossbars; no bevelling was done. Strips of wood 25 mm. × 16 mm. were fixed to the front edges of the stretcher, mitred at the corners and bevelled. An Aerolam F board (aluminium honeycomb with woven glass fibre skin) 14 mm. thick was cut to fit inside the strips at the edges of the stretcher, and was dowelled and glued onto the crossbars but not fixed to the



four outer members of the stretcher (Figs.6 and 7). This construction allowed the stretcher to be keyed out; the expansion takes place between the Aerolam and the inside of the bevelled edge strip.

The completed stretcher was loose-lined with fine linen canvas to provide cushioning for the picture. The picture was then stretched, using slight hand pressure only, and tacked onto the stretcher. Velvet strips were stapled over the tacking edges to protect them, and wedges were inserted behind the Aerolam F board.

The structural treatment of Mr and Mrs Coltman was confined to the absolute minimum. Unlined pictures from even the eighteenth century are very rare; to line one of the few surviving examples would be reprehensible unless no alternative form of treatment could prevent physical deterioration. Though Wright's double portrait could be lined on the low-pressure table (or by other modern methods) without damaging the impasto and texture of the original paint and canvas, every effort should be made to preserve its integrity. The structural treatment described above overcame the two problems which were apparent when the picture was acquired. Firstly, the disfiguring surface deformations (stretcher marks, buckling and cupping) were corrected on the low-pressure table. Secondly, the picture's vulnerability to accidental damage was greatly reduced by the use of a blind stretcher.

Figure 4
Detail of the top left corner during cleaning.

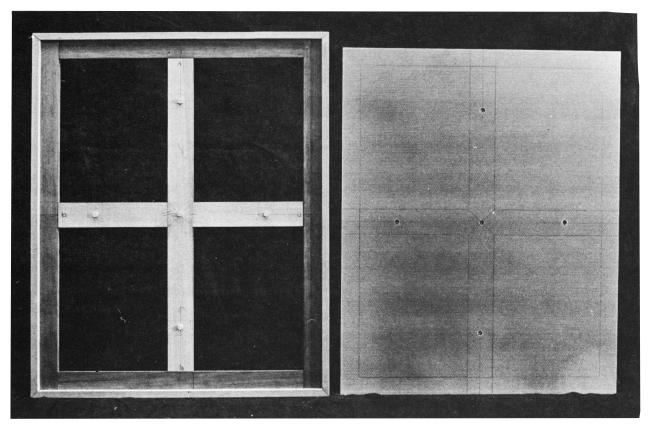


Figure 5 X-radiograph of the whole, taken on acquisition. There are changes visible in the position of the horse on the right, in the horse's ears and in Thomas Coltman's left arm. Larger changes in the landscape do not show; there is foliage under much of the sky on the right, and there was originally a broad tree trunk to the left of the horse's head.

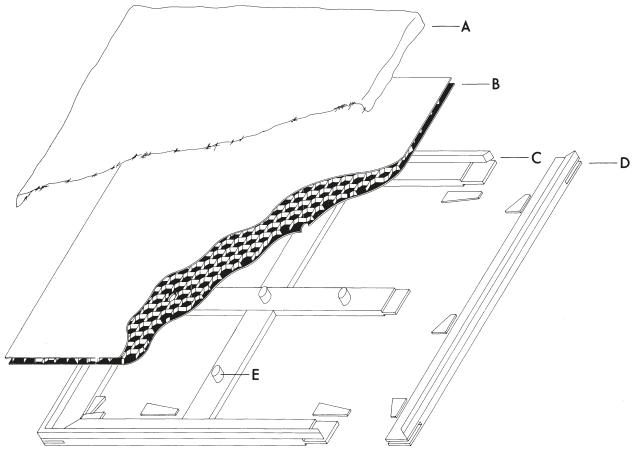
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**Figure 6** The stretcher with added 16 mm. deep strips, which were bevelled off, and the 14 mm. Aerolam F board ready to be dowelled and glued onto the crossbars. The stretcher could then be keyed out in a conventional way.



**Figure 7** Schematic diagram of the construction of the blind stretcher. (Drawing by Paul Hannah.) **Key: A** Fine linen canvas **B** 14 mm. Aerolam F board **C** Bevelled edging strip **D** Conventional keyed stretcher **E** Dowels used to fix the Aerolam board to the crossbars of the stretcher



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



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