



Florence - Malta  
Cross References

# MINNITI BAPTISM

A “SIGNED” MASTERPIECE

*edifir*  
EDIZIONI FIRENZE



# Technique of execution

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## *Support*

Two portions of a linen canvas, having a regular weave (Tela) of 8x8 threads per square centimeter. It shows several fusiform shaped thickenings (Fig. 25). The two parts are vertically joined at 92 cm. from left side edge, with hemming stitches. The canvas is nailed to the stretcher with rusted nails set at 6 cm. interval (however the stretcher's wooden edges are protected in correspondence with the nails by square pieces of leather) (Fig. 26). The canvas side edges are torn but not severely.

## *Auxiliary support*

It consists of a wooden fixed stretcher (Fig. 27), diagonally reinforced, English style, with a central vertical cross-bar (Fig. 28). The thickness of the stretcher is of 4 cm. and it has single fork mortise dovetailed joint (Fig. 29).

## *Priming layers*

1. Orange brown, thick, 18  $\mu\text{m}$ , rough granulometry containing silica and quartz. Slightly fluorescent; compounded by Calcite ( $\text{CaCO}_3$ );
2. Charcoal black, thick 10-20  $\mu\text{m}$ , mestica (UV fluorescence shows presence of oil), containing Calcite ( $\text{CaCO}_3$ ), quartz, feldspates, mica, bioclasts;
3. On top a layer of burnt umber, brown-black as a color, with presence of an organic binder (maybe only a colored ground layer with no inert charge).

## *Scorings*

Some incised marks are present (scored in the priming, covered by the paint layers) inside the legs of Christ; on the left sleeve of the red mantle of St. John, in the flag (different shorter shape) on the left arm of Christ (Fig. 31).

## *Paint layers*

### *Brushstrokes*

The white ones show a high relief impasto; they are dense, and characterized by the use of a small amount of oil; they are quite dry and consequently their brush marks are very evident.

A similar effect is obtained in the ochre/white hair of the main personages impastos.

On the contrary the dark brown colors are applied in a very smooth and flat way. Bitumen glazes are evident (producing a characteristic crocodile skin

craquelure (Tab. XXX)) especially in the lower areas of the rocks and vegetal elements.

The flesh is painted with lead white, yellow and red ochres suspended in an organic binder; it is executed with very smooth and fluid strokes, with no relief and highlights, just a gentle softly shaded manner (typical of Minniti).

The tree trunk is rendered with a mix of burnt umber, bone or charcoal black and green earth.

The red drapery is very rich but mellifluous too; it shows no strong contrasts, only softly shaded passages.

The leaves are dense and flat, not transparent, executed with very round shapes.

The landscape has a minimal definition obtained with green/blue transparent glazes.

The roots are strongly contrasted but the rocks are very flat; grass reeds are showing black now (due to oxidation).

## *Palette*

Ochre (red and yellow), lead white, green earth, Cinnabar, brown earths, smalt blue, lead yellow (not determined by analysis but evident by naked eye in areas not tested), charcoal black, burnt umber, bitumen, Prussian blue (not original, in retouched areas).

## *Retouching*

Faces, eyes, mouth, hands show retouching aimed at creating a strong contrast on the outline contour and at revivifying the oxidized elements; in the sky, near the dove, some blue retouching are not matching anymore.

The angel towel (blue) was originally made with smalt blue (50-80  $\mu\text{m}$ ); on top there is a thin retouching (a layer 5  $\mu\text{m}$  thick) made with Prussian Blue.

## *Craquelure*

Largely open and deep cracks, having an upraised black contour around them, typical of bitumen glazes (Fig. 30).

## *Abrasions*

In the dove and in the yellow sky.

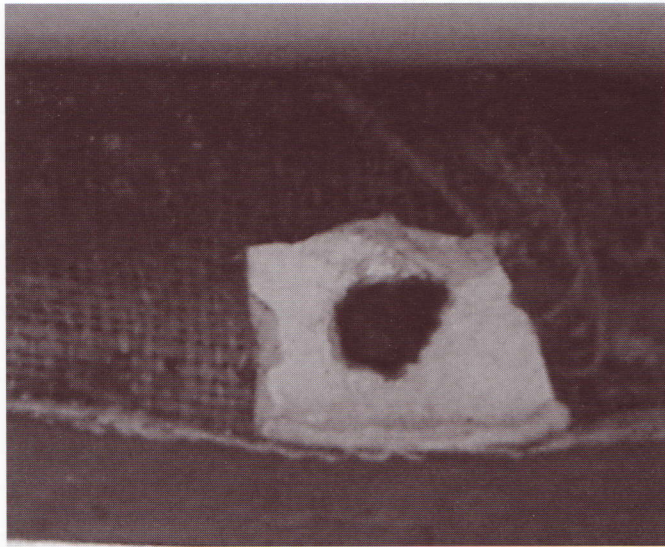
## *Varnish*

A heavily oxidized, natural resin based varnish, layer is present with several applications of oil on top. Surface atmospheric deposits are present, together with wax drips, grime, soot and candle smoke.





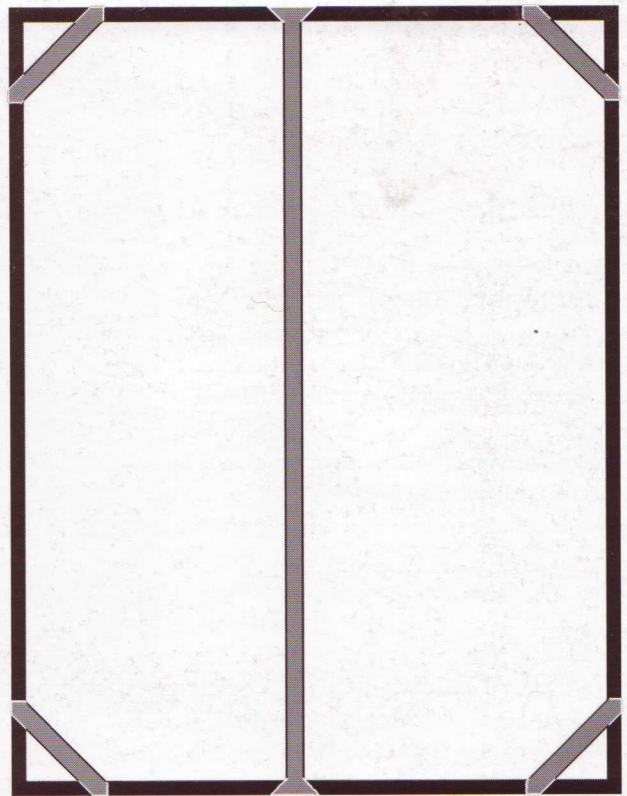
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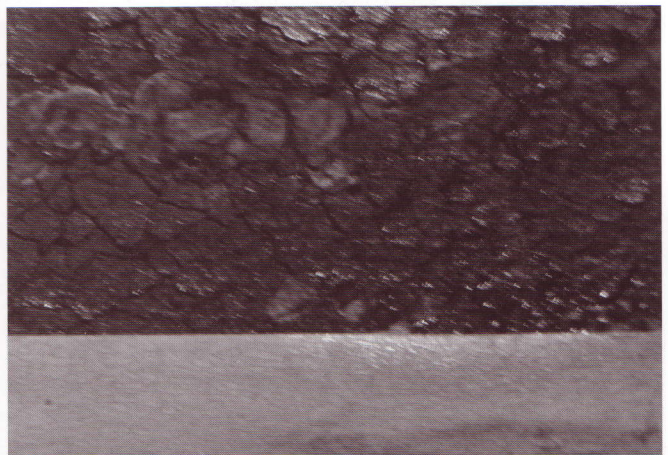
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27

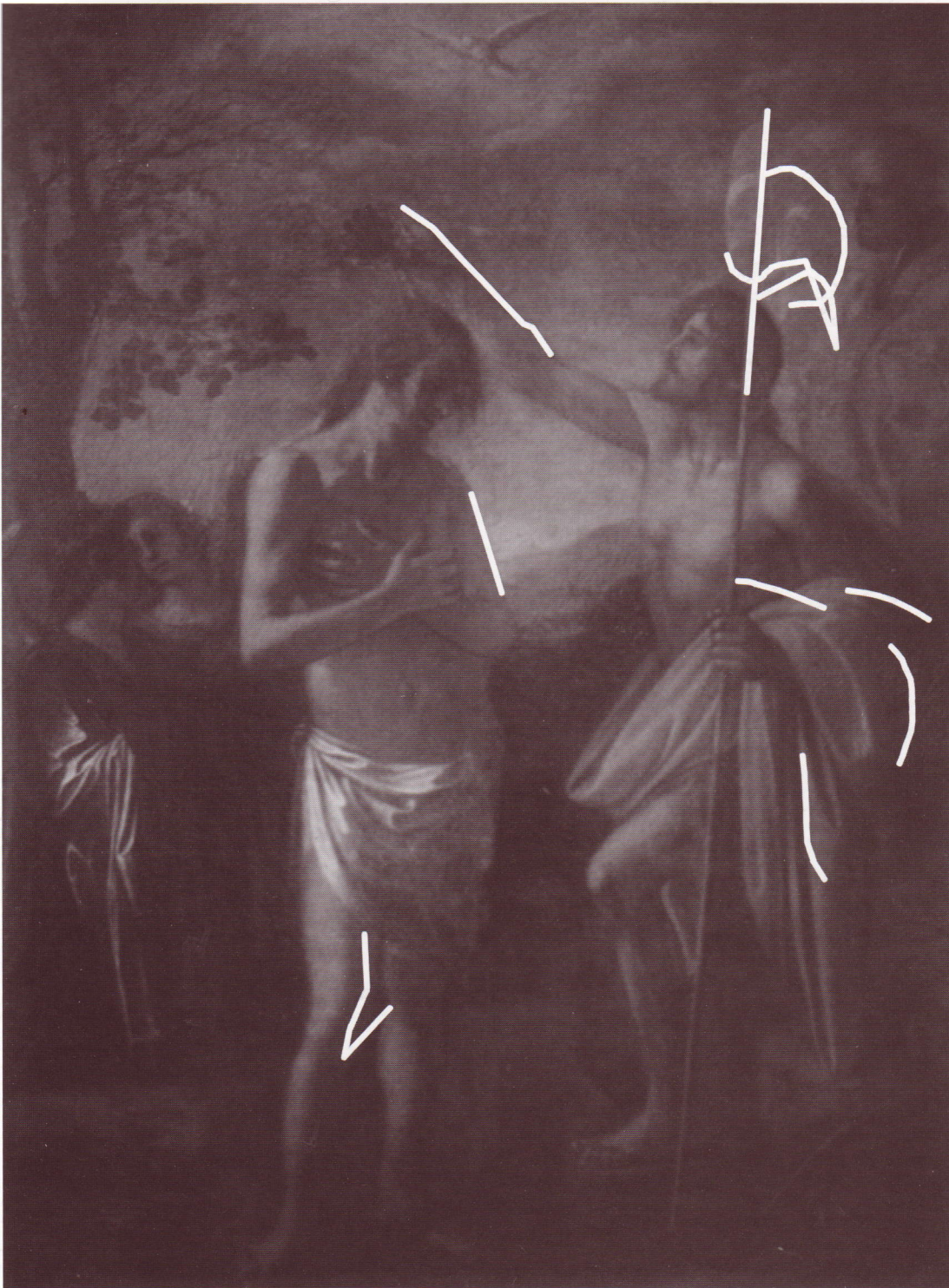


29



30





31

25. Canvas weave with fusiform shaped thickenings

26. Leather pieces on the canvas' side

27. Graphic of wooden stretcher's structure

28. Joint of central cross-bar

29. Joint of the wooden stretcher's corners

30. Crocodile skin craquelure

31. Graphic of scorings



# Avoiding Lining Process: a Technical and Ethical Issue

ROBERTA LAPUCCI

Lining was considered in Italy until the 1980s a common maintenance operation. It was aimed at reinforcing an old, and therefore weak, original canvas support by adhering to its back, a new, strong support.

Today conservators refer to it as if to an ultimate surgery.

This recent consideration has been produced parallel to the developing of the Minimum Intervention Ethic principle<sup>1</sup> and by much documentation on the disadvantages of this procedure.

In the past, this issue was a consistent part of the ferocious debate, the so called "Cleaning Controversy"<sup>2</sup>. While Italian restorers criticized the Anglo-Saxon scientific method of cleaning, which eliminated the final glazes or the patina, the English accused the Italians of relining too often<sup>3</sup>. In 1974 at the renowned Greenwich meeting on Lining Techniques<sup>4</sup>, an International comparison of methods took place; the North-European wax method was severely criticized and the Italian milder "pasta" method was quite appreciated; however, the drawbacks of all the lining processes were very clearly evidenced and a new, more cautious, approach towards this operation developed. Lining ultimately causes the destruction of the original support and a strong compression of the priming and the paint layers. Also distressing is the fact that the original canvas no longer acts as a primary support and new tensile forces are present<sup>5</sup> with the introduction of the new fabric. For these reasons Westby Percival Prescott, co-ordinator of the Conference, called for a Moratorium on Lining to give the conservator time to reconsider the issue.

These negative ideas had their foundation in the drastic methods used by restorers in the past: doubling; transferring from one support to another (Robert Picault); marouflage; lining providing an unnerving, or de-fibering of the original support<sup>6</sup>.

It was also due to the fact that in the past lining and consolidation were executed as a unique operation, while today we tend to split them into two distinguished interventions.

To be able to reverse them separately in the future one must be performed with water soluble adhesives while the other with organic solvent soluble ones<sup>7</sup>. Other doubts were raised due to the impossibility of answering questions regarding the physical

research on tensile forces, their magnitude and their consequences when stretching or adhering with humidity, pressure and heat involved.

In 2004 the UKIC (United Kingdom Institute for Conservation) held a meeting on the subject of Alternatives to Lining; together with a new discussion on the publication of the 1974 Greenwich Papers, these two events substantially changed the restorer's approach.

Today conservators exert every possible effort to avoid a lining, which, as I have said already, is nowadays considered an ultimate traumatic surgery.

Even if, for paintings of large size and preserved in "improper" environments, the problem is more dramatic. A recent conference held in Lucca (29<sup>th</sup>-30<sup>th</sup> of May 2008)<sup>8</sup> showed that also for huge canvas paintings there are some alternative paths.

When faced with a damaged or unstable support one must start by considering all the possible progressive steps in a canvas painting repair:

1. Retensioning on its original stretcher (humidity if needed);
2. Replacing of the original stretcher with a new one (possibly self-expanding);
3. Reinforcing of the tacking edges when torn or oxidized by rusted nails (strip lining);
4. Repairing of tears, rips, cuts or holes;
5. Stabilization of the back and regeneration of the canvas fibres;
6. Total general Lining or Relining.

When a canvas decays mainly it depolymerises; in other words the polymeric chains break into sub-chains of less units.

DP level = depolymerisation level, indicates the numbers of monomers still bond together. 500 is the minimum for paintings to be still considered strong enough to properly support themselves.

With a DP level below 500, a lining is mandatory, as well as when there is a weak, oxidized, fragile, torn canvas, a loss of cohesion between canvas-priming-colour layers, a permanent relaxation of the canvas or a bad previous lining<sup>9</sup>.

When lining is absolutely needed, there are three primary rules to follow:

1. Avoid adhesives which are too strong.
2. Avoid unnecessarily high temperatures.
3. Avoid too much pressure.

The idea of a uniform distribution of heat and pressure prompted the development of the hot/cold



tables, vacuum methods, of the thermoplastic resins or other synthetic materials and of new adhesives and canvases<sup>10</sup>. In recent years conservators have reverted back to a different concept; a round table was first used by the Opificio delle Pietre Dure in 1996 for a large bombed Rubens canvas<sup>11</sup>; it addressed the problem of avoiding heat and pressure. Even further from former lining methods are new ideas for a backing, to exclude also the presence of the adhesive.

Backing aligned itself also to ideas on attention to environmental control and with the invention and application of more technological engineering systems and materials, such as:

- Self tensioning stretchers and framing systems<sup>12</sup>, especially when transportation is involved.

- New systems for the repair of tears and holes. Like the broken tendons in the human body where, with time, the threads tend to contract, when the tears are old, the restorers now use technological pre-tensioning elastic systems (controlled by dynamometers) to bring them back to the right length, before the joining. These require long term stability at adequate RH levels.

Rips and tears are sutured with adhesives, such as Polyamide (soluble nylon) or Beva or Polyester bridges (Fig.32). Other professionals have developed reweaving techniques with surgical needles, carried out under the microscope using fine tools sometimes adapted from dentistry and entomology: "This technique also allows for the viable repair of tears, for the realignment of distortions or gaps resulting from tears and can re-establish the visual, physical and mechanical integrity of the canvas while using minimal intervention"<sup>13</sup>.

- Backing or loose-lining

This method uses no-heat, no-pressure, no adhesive. Another canvas is fixed on the auxiliary stretcher as a back support upon which to lay and re stretch the original old canvas.

Early in the use of this technique Polyester was applied; however condensation between the two canvases formed. Therefore today it has been replaced by Goretex<sup>14</sup>.

In the past a rigid support was sometimes applied in contact (or glued) to the back (wood in ancient times, aluminum honeycomb structure and carbon fiber sailclothes more recently) helping to avoid canvas relaxation; however it does alter the appearance of the painting.

- Stretcher bar lining

This method was developed to prevent damage during transportation of the artwork (being effective only when the canvas vibrates). It uses a Polyester sailcloth stapled to the reverse of the stretcher to create a tensioned structure (very rigid).

- Regeneration of the fibres

Often associated with the backing, it consists in the saturation of the rear of the canvas with a synthetic product conferring new elasticity and tenacity to the old weak canvas fibres. In the past Akeograd AT 35 was used; today a new specific material has been developed, named Aquazol<sup>15</sup>.

- Stabilization of the back.

Restorers, rather than treating the canvas, work on the monitoring and conditioning of the environment. When this is not possible, they stabilize the back of the canvas providing buffer materials against Relative Humidity fluctuation with the use of Art-Sorb or silica gel bags and sealing the back with Goretex foils attached to the wooden auxiliary stretcher by Velcro (to maintain a future possibility of controlling the rear side).

### Conclusions

Today we try to maintain the "prima tela" (original canvas) as long as we can. To have this easily visible on the back, untampered with can provide very important information on the technique used by the artist that should not be cancelled or hidden. Lining is avoided because any chosen method, however mild, will still provoke a general squeezing of the system "artwork" in all its layers, rendering the entire painting thinner and flattening its surface texture.

Better scientific understanding of the dynamics of the canvas paintings structure has permitted us to avoid the use of a unique heavy solution to stop deterioration. One must talk about the degree of intervention. There are hierarchies, and one must always evaluate the possibility of success in respect to the negative side effects. Any intervention is planned on the basis of the characteristics of the artwork's future location environment. In the last 30 years we have seen a revolution: we now provide the artwork with specific single "reconstituting" medicines in order to make it stand on its own legs for a few more years without obliging it to be in a wheel chair.



## Notes

<sup>1</sup> *IL MINIMO INTERVENTO* 2004; HACKNEY 2003, pp. 5-8; ACKROYD 2002, pp. 3-14; HACKNEY 2004.

<sup>2</sup> A general resume on all the quarrels of the XIX and XX century on the topic of the so called "Cleaning Controversy", is present in BECK 1993, pp. 115-140.

<sup>3</sup> SCICOLONE 1993, pp. 51-55; BERGER-RUSSELL 2000.

<sup>4</sup> *CONFERENCE ON COMPARATIVE* 1974; ICOM 1975.

<sup>5</sup> PERUSINI 1989, pp. 254-255 published a comparative graphic between the effects of several lining methods. MICHALSKY 1991, pp. 173-90.

<sup>6</sup> TORRESI 1993; LAROCHE-SACCARELLO 1996, pp. 11-31; CONTI 1973; YOUNG-ACKROYD 2001, pp. 85-104.

<sup>7</sup> SCHAIBLE 1993, pp. 30-34; PHENIX 1995, pp. 21-33.

<sup>8</sup> Lucca, 29-30 may 2008.

<sup>9</sup> SCICOLONE 1993; HACKNEY-HEDLEY 1981, pp. 1-4.

<sup>10</sup> MEHRA 1995; BERGER 1992; VERDELLI-PRESENTI-GORETTI 2000; HEDLEY-VILLERS 1982, pp. 154-158.

<sup>11</sup> *RUBENS AGLI UFFIZI* 2001.

<sup>12</sup> DEL ZOTTO 1990, pp. 3-10 (devices for a more proper stretching of the canvases, self-tensioning stretchers); even better the Teflon based stretcher applied on the *St. John's Beheading* at Valletta by the OPD, see *CARAVAGGIO AL CARMINE* 1999, pp. 23-24; HACKNEY 1990, pp. 44-52.

<sup>13</sup> SCICOLONE 1990, pp. 3-9; BELLUCCI-SCATRAGLI 1998, pp. 140-148; MARCUCCIO 2005; HEIBER 2007 ([aggiornamento@cesmar7.it](mailto:aggiornamento@cesmar7.it)) has shown the advantages and benefits of the reweaving technique as a treatment option. HEIBER 2003, pp. 35-48.

<sup>14</sup> PHENIX 1995, pp. 21-33. BOBAK 2003, pp. 15-20.

<sup>15</sup> WOLBERS-MC GYNN-DUERBECK 1994, pp. 514-527; KNIGHT-BORGIOI 2006.

32. Roberta Lapucci applying Beva bridges on a tear on the back of Minniti's *Baptism of Christ*

