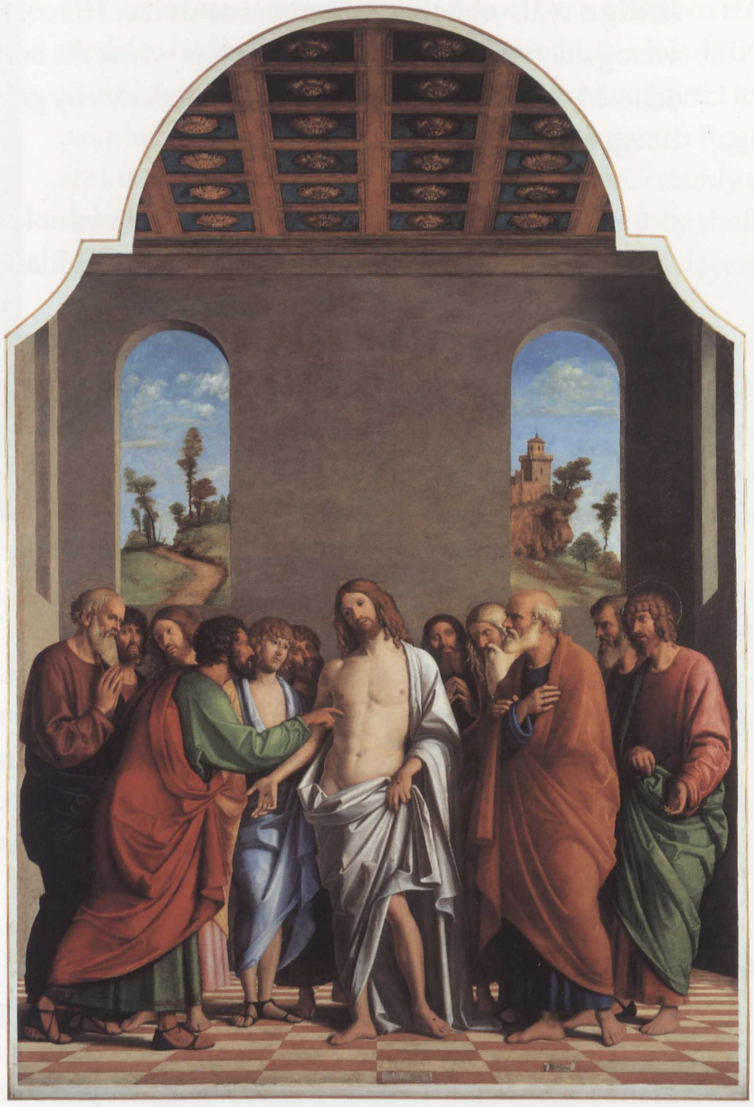
5. *The Incredulity of Saint Thomas*



Artist Giovanni Battista CIMA da Conegliano (about 1459/60 – about 1517/18) (pronounced Chee-ma)

Medium Oil

Support Synthetic panel (transferred from poplar)

Size 294 x 199.4 cm

Date About 1502–4

Possible poor workmanship on the original panel, combined with an unfortunate immersion in the Grand Canal in Venice, led to more than 100 years of conservation problems with this painting, but also gave opportunities to examine its structure and composition in great detail.

The original commission

In 1497 the Scuola di San Tommaso dei Battuti commissioned a new, large, painting to go on their altar in the church of San Francesco in Portogruaro, 50 miles north-west of Venice. Many documents relating to this have survived, and we know that Cima was asked to do the work with the least possible expense. However, recent research has shown that he used several expensive pigments. He finished the painting in 1504 – although he threatened not to complete it unless he was paid more than the agreed amount. Surviving account books list expenses for collecting the painting from Cima's workshop in Venice and transporting it to Portogruaro – the job must have been very difficult indeed, because the picture was 3 m high and 2 m broad and painted on wood. Cima then sued for more payments, and the court case went on until 1509.

Cima lived and worked in Venice, which was central to the European pigment trade at this time, and he would have had access to the widest possible range of pigments. In this painting he used several unusual ones.

The subject

After the Resurrection, Christ appeared to the disciples and showed them his wounds. Thomas was absent and he doubted what had happened. Eight days later, Jesus reappeared and Thomas was allowed to put his finger in the wound in Christ's side – at which point he believed. The choice of subject was a natural one for the confraternity of Saint Thomas which commissioned it. This was a charitable lay association (the 'dei Battuti' indicates that they were also penitential) which ran four hospitals. Such a subject, with Jesus risen from the dead in perfect form, would have offered great comfort to people with leprosy and other such disfiguring diseases who prayed in front of it.

Long term conservation problems

The picture had conservation problems for at least 200 years. In 1981, during the restoration at the National Gallery, an inscription was discovered on one of the floor tiles at the bottom right-hand corner of the picture. This indicated that the picture had been restored in 1745. Many crude retouchings, presumably dating from this time, suggested that the paint was already blistering and flaking before 1745. This could have been due to a fault in the preparation of the panel – *eg* the wrong amount of glue **size** applied before the **gesso ground** was put on – or because of neglect and a poor environment.

Catastrophe

In 1820 the painting was again sent for restoration, this time to the Academy of Fine Arts in Venice. Once again there was an argument over the bill; and from 1822 until 1830 the painting was stored in a room on the ground floor of the Academy. At some point during this time a tidal surge up the Grand Canal, flooded the room and knocked over the easel on which the painting

stood, and the story goes that it spent several hours under water. It was back in Venice for more treatment during 1852-54.

Bought by the National Gallery

In 1863, it was seen in Portogruaro by Sir Charles Eastlake, the then Director of the National Gallery, who was on a picture-buying expedition. He thought it was in poor condition but offered £1600 (then a very large sum); the offer was refused, but this started yet another long legal dispute in Portogruaro about who actually owned the painting. In 1869, the new Director of the Gallery, Sir William Boxall, went to Portogruaro. He was not happy about the state of the picture, but made an offer of £1800, and this time it was accepted. The Gallery then had to wait for nearly a year for an export licence, during which time yet another 'restoration' was attempted. In April 1870 Boxall was shaken to learn that the licence had been granted largely because of the condition of the painting, described by Italian art experts as 'bad' and 'deplorable'. The picture arrived in London in August 1870. The old, thick, discoloured **varnish** was thinned, new varnish was put on, a recommendation was made that 'no restoration should again be attempted', and the picture at last went on display in the Gallery in November 1870.

Continuing conservation problems

In spite of the 'no restoration' recommendation, **blister-laying** was attempted seven times between 1877 and 1938. Since no cleaning was done and the 1870 varnish was not removed, success was unlikely. More attempts were made, without success, to re-fix the loose paint; eventually the whole painting was covered with special tissue paper attached with **mastic** and **turpentine**, and stored face upwards for nearly 20 years.

The painting during conservation. The old wooden panel has been removed and the paint layers are being attached to a new support.

An inspection in 1969 found that the problem was not that the paint was coming away from the gesso ground, but that the gesso – with the paint on top of it – had flaked away from the panel. In many areas the poplar panel had suffered from fungal attack or been eaten by woodworm, so that there was nothing for the gesso to attach to.

The support and ground

It was decided to transfer the painting to a new support. (Transfer is always considered only as a last resort). Remember the size of this painting is 3 m x 2 m ; the total thickness of the gesso and paint layers together is less than a millimetre – and they are brittle.

The painting covered by a single layer of facing paper

The first job was to re-cover the whole paint surface with facing layers of a special tissue paper and adhesive. The whole altarpiece was then placed face down on a temporary support. The wood of the original panel, all 5 cm thick of it, was then slowly and carefully removed by hand using chisels, gouges and – at the end – surgical scalpels. The paint layer could then be attached to a modern fibreglass/ honeycomb aluminium support.

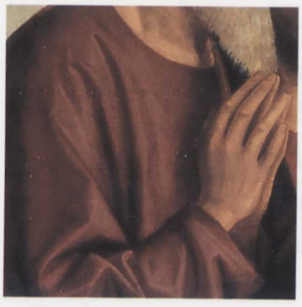
As in all restoration work, the part played by the chemists in the Scientific Department of the Gallery was crucial. They had the opportunity to find out in detail what pigments and other materials Cima had used.

The gesso ground is, as would be expected, a gypsum/glue mix, coated with a final layer of glue size. Some of the straight lines in the painting were incised into the gesso using a sharp point. There is some blackish underdrawing, some of it just visible to the eye. The **infrared** image shows little underdrawing: this may be because an iron-gall ink was used (iron was found in a sample by using **laser microspectral analysis)** rather than a carbon-black ink which would show up better. The basic binding **medium** is **linseed oil**.

The pigments

Saint Peter's under-robe is ultramarine

Analysis of paint layers, by both microscopy and laser microspectral analysis, showed that the blue in the ceiling is largely **azurite** but with an impurity which gives a greenish colour. This was probably a deliberate choice. Elsewhere in the painting, azurite is mostly used as underpaint for the very expensive **ultramarine**, but both pigments – mixed with a large amount of **lead white** – are used for the sky. The best ultramarine is used in the under-robe of Saint Peter, standing to the right of Christ as you face the picture. Lower quality pigment was used for the lesser apostle on the far left, probably to make him less prominent.



The dark red is haematite

There are three reds in this picture: red **lake** with a little **vermilion**, vermilion with a little red lake and **haematite**. For example, the robe of Saint Thomas himself is largely vermilion glazed with red lake in the shadows. Haematite has been identified in the underpaint of the upper robe of the apostle on the far left. This is a rare pigment in oil painting. One reason may be that the mineral haematite is very hard, and therefore difficult to grind up.

Saint Thomas's red robe is vermilion glazed with red lake

The green of the grass consists of natural **malachite** mixed with **lead-tin yellow** and some lead white. The bright green of the robes of Saint Thomas and the apostle on the far right is complicated in its layer structure, containing

malachite, **verdigris** with lead white and some lead-tin yellow, glazed with **'copper resinate'** or similar.

Saint Peter's orange robe contains orpiment and realgar

The yellow of the robe of the apostle behind Saint Thomas is mostly lead-tin yellow, but with a **glaze** containing an orange-brown softwood tar. The yellow embroidery on the hem of Saint Thomas's robe and elsewhere is lead-tin yellow + yellow **ochre** and possibly yellow lake. The orange robe of Saint Peter contains the mineral arsenic sulfides, **orpiment** and **realgar**.

The black of the sandals worn by the apostles on the left probably contains **bone black** (very fine brownish particles of carbon) and vegetable black (larger, slightly shiny particles) but not the long splintery shapes of the particles of charcoal. The warm grey of the walls contains mostly bone black and lead white. The subtle optical effects – rather like a metallic sheen – in Christ's drapery are achieved using the difference between a cool grey based on the vegetable black with, over it, in some areas, the warmer, rather darker grey from the bone black.

The various flesh colours here contained lead white, red lake, vermilion, a transparent orange-brown and sometimes a little black. The paint for the body of the risen Christ also contains some pale green malachite to give it a rather deathly greyness.

Identification of most of the pigments used by Cima greatly helped the restoration. It proved possible to imitate closely the structures of the paint layers so as to achieve the correct optical effects. Also, in areas of blue and green in particular, careful choice of pigment avoided the problem of **metamerism** – *ie* two paints which appear to be the same colour in one light (*eg* daylight) but different in another light (*eg* tungsten lamp).

A happy ending!

In all, the treatment and restoration of Cima's altarpiece took 15 years. If you doubt whether it was all worth while, go to the National Gallery and up to its Central Hall. Turn left, along the great walk-way that runs in a dead straight line from the East Wing through the West Wing across the linking bridge and into the new Sainsbury Wing. *The Incredulity of Saint Thomas* is in front of you all the way, gaining in power as you get closer, the perspective in it carefully worked by Cima so that on its altar in Portogruaro, or on the wall now, the lines meet at the level of your eye, and the drama centred around Saint Thomas and Jesus appears to be happening now, in a room at the end of the vista.... And the architecture has been so designed by Robert Venturi and Denise Scott-Brown that, as you get nearer, the columns on each side of the aisle take the colour of the wall behind Jesus and gradually reduce in height to match the painting and make the illusion even more complete. Artistry and craftsmanship, old and new, combine to make a masterpiece into an intense experience.