The Chemistry of Art The paintings

4. An Allegorical Figure



Artist Cosimo TURA(before 1431-1495)
Medium Oil and egg
Support Poplar
Size 116.2 x 71.1 cm
Date Probably late 1450s

X-ray photographs of this panel painting showed that there had been substantial changes to the composition made at an early stage. Were these by Tura, or was he painting over a picture made by someone else?

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The subjectThis is one of a series of the Nine Muses painted in a room of the Villa Belfiore
in Ferrara, Italy. Tura is known to have been working in the room from
1459–63. The figure may represent Calliope (who was associated with justice).
The meaning of the picture is not clear. Why is she seated on such a strange
throne? Why is the bodice unlaced lower down? Does the bulge suggest
pregnancy? What is going on in the cave at the bottom right? What is she
holding in her right hand and why? And so on.



X-ray image. Notice what appear to be organ-pipes

An **X-ray** photograph complicates things further, as it shows that originally the throne was backed by what look like organ pipes. Could this perhaps be Euterpe, the Muse of Music?

The alteration was drastic – the subsequent painting is different not only in **medium** (oil instead of **egg tempera**), but also in composition and colour, and almost certainly in subject matter.

It is one of the earliest Italian paintings in the National Gallery to be principally in oil, and the earliest to be done in a Netherlandish technique.

An early Italian oil painting



Cloth-of-gold sleeve

The painting is of great technical interest because it was done at the time when Italian painters were changing from egg tempera to oil (indeed, both media are here, with oil on top of the tempera). It is likely that Tura was influenced by paintings and/or people from northern Europe, where the oil medium had been in common use for centuries. It is difficult to believe he could have used oil paint so successfully without direct instruction. Some paintings by the 15th century Netherlandish painter Rogier van der Weyden are known to have been at Ferrara at this time. Certainly the 'cloth of gold' sleeves of the figure here are in a fabric which is very similar to those seen in Netherlandish paintings, as is the sequence of paint layers.

The panel is poplar (identified by microscopy). It was heavily flawed and cracked, and a patch of wood inserted in the plank by the original maker was pushed forward by movement of the fault and caused damage to the **ground** and paint layers. To cover faults a layer of fine **canvas** was glued over most of the panel before the **gesso** ground was applied.

The varnish had been deliberately brown-tinted. In 1866 the painting had been sent to a restorer in Milan who used the brown earth pigment **Cassel earth** in **varnishes** for artificial **patination** of pictures. Fortunately the varnish and retouchings were easily and completely removed with alcohol.

Flaking was due to poor adhesion between paint layers, especially in the green areas. In 1939 the remaining blisters and flake edges were fixed using **sturgeon glue** with an electrically heated spatula.

Cleaning intensified the **craquelure**; but, since such a surface cracking is characteristic of many old paintings and typical of those by Tura, during restoration the cracks were not restored but reduced in width to look like the cracks in the less-affected parts of the picture. Such retouching needed great precision, especially on the face.

The paint layers

The sequence of paint layers is often exceptionally complex. The evidence from the X-ray and **infrared** investigations, coupled with microscopic analysis of many paint samples to establish pigments, and **gas chromatography** to find the binding media, suggests that the painting developed like this:

The first design was drawn on the prepared panel. The main curves and lines of the columnar throne were lightly cut (incised) into the gesso. The figure was drawn with a brush using some kind of ink. The upper part of the figure was similar to what we now see; the legs and drapery were very different. Most of the underdrawing then received one or more layers of paint. The robe had a layer of **red lead**, probably intended as underpaint for the more expensive **vermilion**. The bodice and sleeves were painted pale blue using an **ultramarine/lead white** mix. Landscapes were blocked in with green artificial **malachite**, and the sky with two to four layers of **indigo** with white and sometimes **azurite**. The columns of the throne were golden yellow. In the paint samples where the bottom layer of paint still adhered, the medium in those layers was shown by gas chromatography to be egg tempera.

Before work on the painting re-started, a layer of smoke and dirt formed on the surface. In the days of open fires, candles and oil lamps this need only have taken a few years.

The interval leads to the question – did Tura do the first design?

The lines and curves of the new throne were incised into the existing paint and gesso, then the dais, throne, shell and sea monsters drawn in. The lower part of the figure was completely redrawn on top of the first design, so that we now have a slightly 'looking-up' viewpoint.

The new painting used early Netherlandish techniques. Opaque pigment mixtures in oil were covered where appropriate with transparent and semitransparent glazes. Walnut oil was the medium in the paint for the white marble dais – presumably walnut was chosen for areas of light colour as it 'yellows' less. **Resin** was added to the **linseed oil** in the darker glazes to add to their richness and transparency.

Summary It now seems likely that the original unfinished design (probably by another artist) was overpainted by Tura when he took over the project for the Studiolo at Belfiore. He adopted the technique, and to some extent the style, of the Netherlandish painter Rogier van der Weyden whose works he would have seen at Ferrara.