

Some Technical Observations on the Frieze of the « Villa dei Misteri » in Pompeii

Oecus number five in the Villa of the Mysteries provides one of the fullest and most intriguing examples of ancient wall-painting (fig. 1-3). The illusionism of the Second Style opens up the walls of the real room through the use of perspectival painting ; there is an impression that all around opens out another, more sumptuous, space, with architecture covered in precious marble veneers. Here a podium made of strips of breccia and marble projects from a wall made of red porphyry orthostats interspersed with pilasters. The wall is crowned by a frieze decorated with meander pattern, a row of alabaster and green marble blocks, and a black marble frieze with Cupids amongst acanthus tendrils, and closed at the top by a stucco cornice painted ivory white. On the podium figures, a little under life-size, form a megalography. Their identification is in great part uncertain, but all of them seem to be subordinate to the central group on the east wall, which shows Dionysus and Aphrodite, on axis with the main entrance.

Much has been written on the significance of this decoration, including some of the most profound of the archaeological literature, yet even so certain essential points for the establishment of the technique, chronology, composition and reading of the decoration have been ignored.

Reinhard Herbig in a publication of nineteen fifty eight, which is still a fundamental text in the vast bibliography on the problem, doubted that the figures and the podium were contemporary with the rest of the painted decoration, that is to say the architecture, and he proposed that the megalography was executed anything from ten to thirty years later : according to Herbig the architectural decoration was painted in the first half of the first century B.C. and the megalography in the second half on the same century. Perhaps because he stated explicitly that the observations, on which he based his hypothesis, were made with the aid of a powerful magnifying-glass, they have never been subjected to verification and his theory has always been accepted by scholars.

Herbig based his conclusions essentially on two declarations. First, in some places where the paint of the figures has come off, that of the underlying architectural elements appears. So, for example the green of the lower band, which surrounds the pilasters, shows through the right hip of the boy reading (fig. 2), the right forfinger of the pan-pipe playing paniscus (fig. 2.7), and the right shoulder of the Oracle-Silenus (fig. 1). Second, the podium shows an irregular join which follows the lower green line of the orthostats and the bottom of the figures and objects of the megalography which break into the top plane of the podium (fig. 4-5). The conclusion that he drew therefore was that the wall-painting must originally have had a flat socle, and that ten to thirty years later the megalography was painted over it, but when it was realised that the figures and objects appeared to hang in space above the flat socle, the socle was cut back to the lower edge of the megalography and to the lower green frame of the orthostats, and so the perspectival podium which we see today was painted in as a visual support.

Herbig's observations were accurate and correspond to the facts, which had already been noted, but his conclusions, which at first reading seem so acute, at the second leave one perplexed. Above all how can one explain how the painter, otherwise so expert, capable of composing the megalography on a

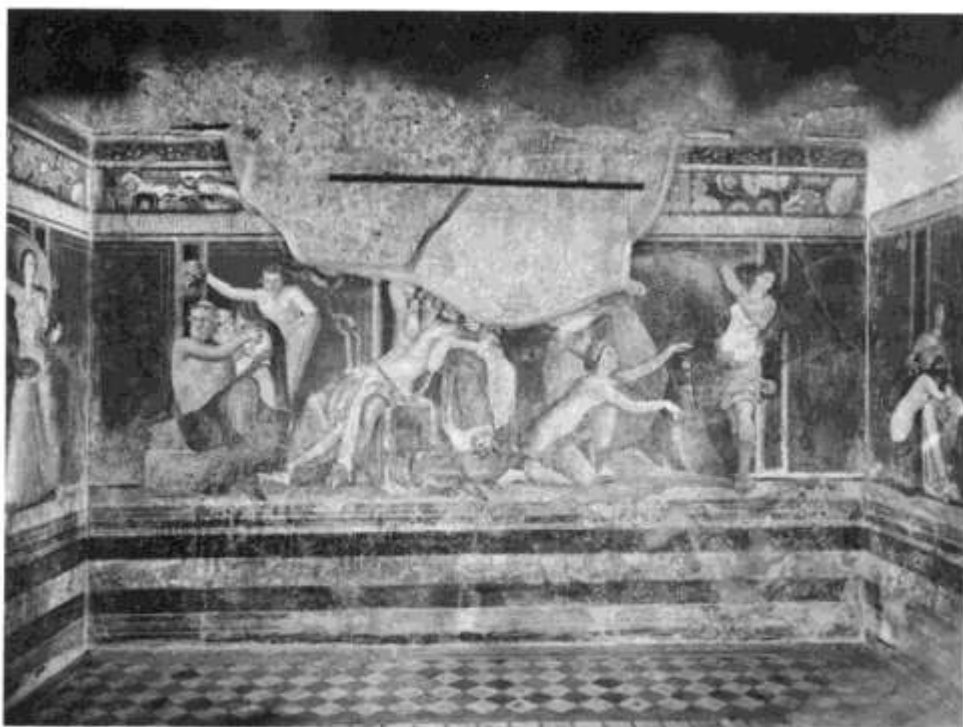


Fig. 1. East wall with the representation of Dionysus and Aphrodite.

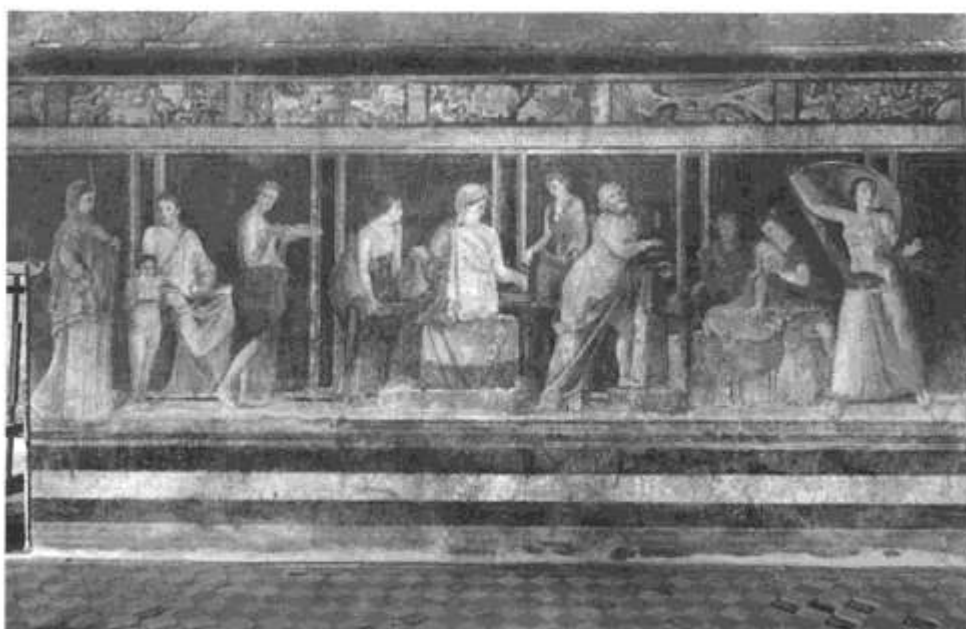


Fig. 2. North wall : « The reading of the rituals », « Offering », « Pastoral scene ».



Fig. 3. South wall : « Woman combing her hair ».

wall which was already painted, should be so unskilled as not to foresee that the figures would need a surface to stand on ; so that he had afterwards to go to the lengths of cutting back the socle along the lower border of the main composition in order to insert a podium ? In the second place, to be consistent to his conclusions, why didn't the decorator paint the podium over the socle, as he is supposed to have painted the megalography over the orthostats and pilasters ? According to Herbig's suppositions it has to be deduced that the painter used a tempera technique, or something similar, so as to paint the megalography on a surface that had been dry for many years, he took the trouble to replace the plaster entirely, and then frescœd the wall. The use of the two techniques on the same wall, at the same time, and for the same purpose, seems not only unjustified, but also strange. Thirdly, the fact that in many places, where the paint of the figures has come away, the colours of the underlying architectural elements appear, is not unusual. We find it also where there is no reason to believe that the decoration was painted over an earlier surface. So for example a fragment of a black-ground Fourth Style socle with a dog, shows that underneath the painting of the dog the vertical band which begins above the dog's head was painted in its entirety (fig. 6).



Fig. 4. North wall : « Frightened girl » (detail).

These theoretical doubts force one to make a verification « in loco » of Herbig's assertions, an examination which contradicts his suppositions and fully confirms that megalography and architectural background were executed at the same time, in the sense that the megalography was painted in the spaces reserved on the background.



Fig. 5. South wall : « Dancing girl » (detail).

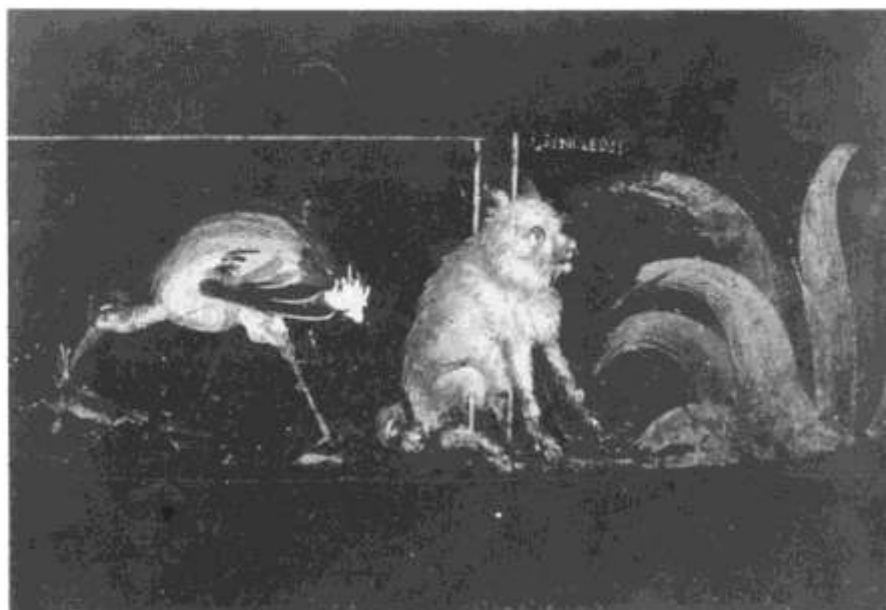


Fig. 6. Pompeii V 1, 18, Casa degli Epigrammi, Fourth Style wallpainting.



Fig. 7. North wall : « Seated priestess » (detail).

Proof of the contemporaneity of megalography and architectural background is found in the fact that the people decorating the ionic « kyma » which frames the pilasters didn't paint in the « ovuli » in the egg and dart pattern, or rather they were painted very lightly, where it can be imagined the shadows of the figures would fall.

The basic schema is that the « ovuli » are painted in yellow on a dark brown band. Therefore according to the depth of the shadow they are either : painted entirely, but with only a little yellow ; or, high-lighted with yellow only around the edges ; or, not painted at all so that only the background band of dark brown appears.

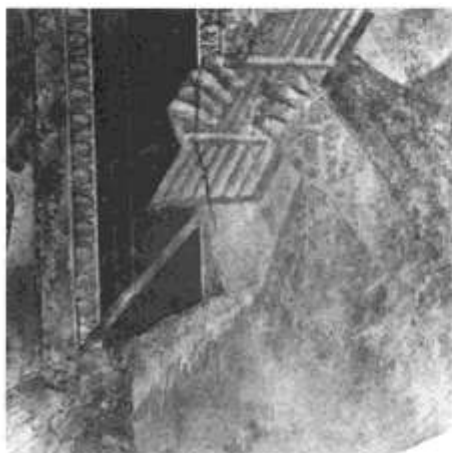


Fig. 8. North wall : « Pastoral scene » (detail).



Fig. 9. East wall : « Winged Genius » (detail).



Fig. 10. East wall : « Dionysus » (detail).



Fig. 11. West wall : « Eros » (detail).



Fig. 12.
East wall : « Oracle scene » (detail).



Fig. 13. Detail of the mortar on the right-hand door jamb of the main entrance to the « Sala dei Misteri ».

The places where we can observe this phenomenon are : one, on the north wall under the right arm of the female figure seated with her back turned to us. The shadow is very strong, so only the dark brown band and not the « ovuli » are painted (fig. 2.7). Two, under the right forearm of the « paniscus » playing the syrinx ; the same effect as in the first example (fig. 2.8). And three, to the right of the winged « genius » on the east wall ; here the « ovuli » are hardly accentuated (fig. 1.9).

If the architectural decoration takes account of the figures, the two must be contemporary. Furthermore Herbig's statement that the pilasters are painted in their entirety underneath the figures is wrong. In some places, in fact, one can see that the vertical egg and dart frame stops short of the figures. Thus, near the right side of Dionysus where the violet colour of the pilaster appears between moulding and body (fig. 1.10). Secondly, behind the left arm of Eros on the west wall (fig. 3.11), where the « ovuli » are hardly emphasized, and a little above his hip there are a series of short vertical brush-strokes in yellow-brown which the painter evidently thought would be covered by the figure.

To these two examples one can add a third, on the right of the theatrical mask suspended behind the old Silenus on the east wall, next to the beard the yellow band of the egg and dart moulding is narrower than the others, and is carried out with hasty brush strokes, while the « ovuli » are not painted at all (fig. 1.12). Given that also the two parallel black lines on the adjacent orthostat stop at the arm which holds the mask suspended, we can deduce that the yellow band was painted afterwards when it was realized that parts of the architectural decoration were not in fact covered by figures.

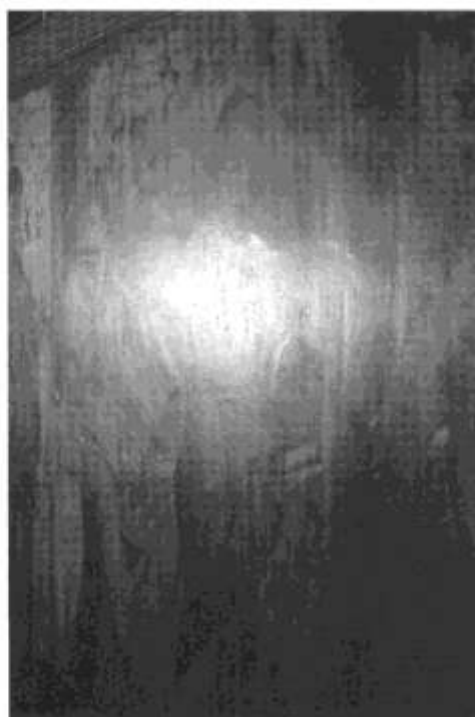


Fig. 14. North wall : « Basket carrying servant girl » (detail). The reflected light shows clearly the depression in the colour-plane of the figures as well as the finger-marks of the painters, which surround close together the profiles like a pearl-necklace.



Fig. 15. North wall : « Singing Silenus » (detail). Between his foot and the podium can be seen the horizontal levelling line.

Perhaps analogous to this example is another one on the south wall near the female figure at her « toilette » : the pilaster which occurs above her head should reappear down below — or at least part of it — between the legs of the stool, but it doesn't (fig. 3) ; however the red between the legs of the stool is not the same colour as the ground, not only is it deeper than the red of the panels nearby, but it also covers the legs of the seat in many places. It was therefore applied after the figure was painted, presumably to cover up such mistake.

To sum up, the shadow of the figures projecting onto the egg and dart frame proves that the pilasters were not only not painted in their entirety underneath the figures, but even sometimes stop short of the figures. Thus the orthostat wall never constituted an autonomous decoration before the megalography was painted.

Let us move on to the second point which induced Herbig to suppose that the megalography was later : the irregular line of the join between megalography and podium (fig. 4-5). However confirmation that the podium was executed at the same time as the rest of the decoration, or rather in the same working process, is irrefutably found in another technical detail. Near



Fig. 16. East wall : « Woman kneeling by the lyknon » (detail). Correction of the hand.

the inner corner on the right of the main door (where the Eros is painted) an iron staple has been driven into the walls, in modern times, to hold the chain which acts as a barrier (fig. 3.13). The result is a modern fracture, corresponding to the join between the middle zone of the wall and the podium. The two sets of plaster above and below the join are absolutely identical in colour, thickness, and frequency of opaque white calcite crystals. Therefore not only the megalography, but also the podium, is contemporary with the painted architecture, contrary to Herbig's supposition.

At this point I would like to introduce an observation in the light of which all these problems are definitively resolved. I am indebted to Mr. Reinhard Meyer-Graft, restorer with the team working in Pompeii under the direction of Professor Volker Michael Strocka. He showed me that by looking at the wall in reflected light one can easily see that the paint of the figures sinks back into the plane of the orthostats, and that in the red of the orthostats, around the edges of the figures, one can still observe the finger-marks of the decorators (fig. 2-14).

If the pigment of the figures has been pressed into the background plane with a certain degree of pressure, it means that the underlying plaster was still fresh when this was done. So we have proof that the decoration of the whole room was carried out in fresco-technique, and that in particular when the megalography was painted the plaster was still soft ; at the most only a



Fig. 17. Relief from Sens : fresco-painters at work.

few days old. In fact the partial compression of the pigments into the underlying plane is the consequence of a process, well-known in fresco, called « *lucidatura* » : that is to say the burnishing of the surface, perhaps placing waxed parchment between the wall and the burnishing tool, and here finished off using the hand covered in some greasy substance, as the finger-marks around the megalography show.

One should remember that this technique is different from that of « true fresco » as we know it above all from the Renaissance. In « true fresco » the colours are fixed only by the action of the lime in the plaster, which remains receptive to the application of the pigments for only one day. For this reason the painter — above all when the painting involves a lot of work — has to work bit by bit on small patches of fresh plaster less than a metre wide.

In the megalography, however, the vertical joins — not generally visible, or perceptible to touch — coincide for the most part with the green bands which surround the orthostats, which are placed at around a metre apart. On these bands, in fact, one can often see that the green pigment has come off, because when the junctures came to be painted the plaster was already dry, and the fixing action of the lime was diminished. However the width of the areas delimited by the « day-work » lines seems to exclude the possibility that this was carried out in « true fresco ».

A further point against an interpretation of this fresco-work as « true fresco » is that in the architectural background the red cinnabar of the orthostats is a pigment which isn't fixed only by lime, and in the megalography the thick impasto of the paint contrasts with the characteristically dry appearance of the colours in « true fresco ».

So here we are dealing with a mixed fresco technique, in which, perhaps, additives were included in the plaster or the pigments to assure — besides the action of the lime — the fixing of the paint, or to increase the amount of time the plaster could be worked on. However we do not know exactly what these additives might be. Klinkert thought of an albumen-based binding substance mixed with the final layer of plaster, whereas Mora thinks it was a simple slip (coloured clayish earth) which could be used alone or added to other, brighter, pigments, and that « they allowed one to obtain a more plastic and softer colour ».

In the light of all this information — that we are faced with a type of fresco — we can try to reconstruct the original working process. We know that the decoration of a wall proceeded in horizontal bands from the top to the bottom ; because otherwise the parts already painted below would be spattered by paint from the upper sections. Each band is known in jargon as a « *pontata* » because it corresponds to the amount of plaster that the decorator could put on by himself from his scaffolding. In this case the first « *pontata* » is marked by an horizontal join which runs along the green band

below the meander frieze (fig. 1-2). The second « pontata » is between this join and the irregular one which runs along the lower edge of the megalography (fig. 4-5). Obviously it is impossible that the decorators carried out a length along the whole wall in one day, so there are also horizontal joints, which, as I already said, are « hidden » under the green bands which frame the orthostats.

With this working method of large squares applied successively we should also take into consideration a mark found on the north wall : a line incised in the painted wall to the left of the half-covered Silenus' foot (fig. 2.15). The line is exactly at the height where the back edge of the podium meets the orthostats. There can be no other explanation than that it was a levelling-line which the painters used as a reference when moving from one block of work to the next, so as not to change the height of the podium.



Fig. 18. Michelangelo, Sistine Chapel, « The Last Judgement ». The white lines mark the day-work sections.

In the light of these new facts we can now attempt to determine the organization of the work. The curtailment of the egg and dart band and the retouchings carried out near the mask and under the seat of the « bride » prove that the people who painted the architectural background were not the same ones who did the figures, because otherwise such small imperfections wouldn't occur. Therefore it is a case of mistaken calculations on the part of those who carried out the architectural decoration. If we add to this the fact that the places catalogued by Herbig where the colours of the pilasters appear through the figures are all marginal, that is to say around the edges of figures, then we can more easily piece together the process of decoration. It is clear that the least capable workers, who did the backgrounds, in general painted more of the pilasters than was necessary for the composition, but not all over the wall, both to save time and work ; this allowed the more expert group who executed the megalography soon afterwards to paint without worrying about defining the limits of the painting. The background colours were applied in abundance, and the detailing of the pilasters carried behind the figures just enough to give an impression of continuity to the architectural elements. It would seem that the background was applied fairly freely, but the decorative elements painted sparingly, as here with the egg and dart.

The differences between the work of one group and another seem to confirm the hypothesis that no preliminary background sketches were made for the megalography — either incised or drawn — since nothing can be seen today. Therefore we should imagine the two coordinated teams working together on the still-damp walls. An indication of the relatively fast execution of the megalography can be seen in the original correction of the hand of the female figure kneeling near the « lyknon » (fig. 1.16). Notwithstanding, the use of separate cartoons for such a complex composition is not necessarily excluded, such aids seem to be shown in a relief from Sens which depicts decorators at work (fig. 17). Another possibility is that tracings were employed, held by hand against the wall, and that the tracings disappeared in the subsequent burnishing.

Let us look again at the fracture-line between the podium and orthostat wall. Herbig rightly disputed Maiuri's hypothesis that the podium was carried out first. Indeed how could the painter outline the lower edge of the megalography unless it was done first ? There is no doubt that the podium was executed last, after the rest. The irregular join between the podium and lower edge of the middle zone is entirely the result of day-work joints. Even if we are normally accustomed to clean, straight edges, the experts have no difficulty in recognizing these as such. I should like to refer only one significant example : the « Last Judgement » of Michelangelo in the Sistine Chapel (fig. 18), which was completed in about three years, is made up of 447 day-work sections, all of which have irregular borders. In the case of the Villa of the Mysteries the proof comes from the fact that the other

joints in the wall are « hidden » under the green band which frames the orthostats. If the juncture is so obvious, this is because for the middle section we must imagine a relatively lengthy period of execution, since the figures must have involved a lot of work. Probably the single sections of plaster between two vertical joints were kept damp by periodic spraying with water and burnishing while they were being worked. Meanwhile the sections already completed would become dry, thus the lower edge would be so dry by the end that the plaster of the final « pontata » — that is to say the podium — didn't bind well to the preceding one.

In conclusion, there can no longer be a shadow of doubt that — contrary to what Herbig proposed — megalography, podium and architectural background were executed contemporaneously.

Umberto PAPPALARDO

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