

STEREOTYPES IN THERAN WALL PAINTINGS:
MODULES AND PATTERNS IN THE PROCEDURE OF PAINTING

ABSTRACT

Our paper focuses on the way in which painters drew the contours of figures in the Thera large scale compositions. We have observed that, in the figures examined from Xeste 3, a number of the curves which form the outlines of the figures are identical. We consider this an indication of the possible existence of a system of stereotyped fixed curves which were used to articulate the outlines of figures. By comparing different parts of the contours of the figures examined we have observed that these curves may be flipped vertically or horizontally or inclined to a greater or lesser degree. It is difficult to imagine a human hand being able to execute such curves, and at so many varying angles (from the slightest variation to virtually inverted), without the help of some kind of device.

Introduction

A stereotype is a pre-determined, standardised way of depicting an image or part of an image. It relates to the way in which an image or its parts are rendered, and not to the content of the image itself or to its meaning or possible symbolism.

It is well known that art in general was tied to stereotypes up to the nineteenth century. In religious and secular painting the rendering of figurative elements, shading and composition conformed to rules and stereotypes. This was probably even more valid for the art of the Late Bronze Age in Crete and the Cyclades, as a result of the great demand for extensive and repetitive iconographic programmes (cf. Boulotis here, vol. II). We may assume that at that time painters learned their craft through apprenticeships, acquiring knowledge of the traditions and rules of painting, as well as the appropriate skills, through constant practice over a long period. Secure and accurate teaching of techniques was achieved through stereotypes in the sense that the aim of the novice was to reproduce the teacher's work (Tetsis 1990, 4-5, 15-16, especially the notes of Chevalier Tambroni and Victor Mottez). Although the 'Renaissance model' of master-apprentice relationship is almost certainly inappropriate (Cherry 1992), a form of learning through paradigms, exercise and repetition is extremely likely.

The use of stereotypes is to a large extent a convenience. They support a painter, allow him to work with precision, safety and comparative speed, without necessarily suppressing his potential for expressiveness or experimentation. Certainly, the quality of a work cannot be qualified or judged adversely merely because of the use of an assistant or of some kind of conceptual or mechanical aid.

On the other hand, rules which arise from social structures, ideology, religion, tradition *etc.* may have a defining effect on iconography and depiction. One example of this is the fact that in the Thera wall paintings female figures are shown clothed but with their breasts naked, or adolescents are shown with their heads shaved. In these cases we often see the repetition of iconographical elements, as, for instance, in the depiction of similar curls of hair (for example, the girl in a peplos on the wall painting of the 'Lustral Basin' and the 'Boxing Children' have similar curls; and the same applies to the young 'Crocus Gatherer' from the east wall of Room 3b of Xeste 3 and the child on the 'Men fresco' on the ground floor of Room 3b, Xeste 3). Another example of adherence to socio-symbolic rules is the use of colours: blue for shaved heads, white for female skin, red-brown for male skin *etc.* (for the conventions employed in the rendering of human figures, see Doumas 1985; Televantou 1988, 145-149; 1994, 377; Morgan *here*, vol II, with references).

Stereotypes may be opposed to naturalism, but their relationship to realism is more complex. Since realism tends towards the expression of the essential nature of things, an advanced and elaborate system of stereotypes does not necessarily detract from this.

The painters of the Thera wall paintings, as we shall argue below, made use of stereotypes. On the other hand, they also attempted to depict 'reality', as is indicated by the solutions applied to the rendition of the movement of human figures, by the spatial composition, by the depiction of 'snapshots' and expressions, and by persistent concern with detail (Doumas 1992, 22-24; Televantou 1992b, 149; Televantou *here*, vol. II). But reality in the sense of naturalism is not being depicted. Even if a painter has a frontal head in mind, both tradition and his education oblige him to render it as a profile. The images he creates are not the result of faithful observation of the natural environment – a concept which appears only in the art of recent centuries – but the result of applying certain rules, modules and pictorial stereotypes as discussed above.

Curves as constant parameters

We have observed that in the Thera wall paintings a number of the curves which form the outlines of figures are at least in part identical. We consider this an indication of the possible existence of patterns for drawing figures, based on certain curves. As we shall show, these curves are of fixed shape and size. Our study focuses mainly on the way in which painters drew the contours of figures in large scale compositions. In miniature frescoes, where sizes are dealt with in a different way, it seems that different rules applied. We have not so far noticed any stylised curves in these.

Examples

The group of wall paintings which we have examined thoroughly is that from Xeste 3. We had the opportunity to photograph, observe and draw parts of the wall paintings at the New Museum of Fira and in the laboratory at Akrotiri. We shall also mention examples of other wall paintings as isolated instances; and in these cases we have attempted a preliminary, comparative study of figures belonging to the same composition based on published photographs (Doumas 1992). The figures from Xeste 3 were photographed and printed to the same scale, so that we could study them in their correct size relationships. In searching for the curves we used tracing paper and an image processing computer program.

At this stage of our research we used sections of the outlines of figures selected at random to provide comparative curves. We examined whether they fitted curves in other figures, by turning them in all possible directions. In order to make our comparisons more valid, the sections of the outlines which we used as working tools were as large as possible. Nevertheless, it is important to bear in mind that this research is still at an early stage.

Seeking for and examining the curves is in itself a difficult task, because the ends of a line often cannot be defined precisely. Moreover, the original drawing is sometimes concealed by colours.

Despite this, our aim has been primarily to demonstrate the existence of fixed curves, and only secondarily their precise terminations.

1. Curves of the face

In order to investigate the curves which compose the outline of the face we examined the curves of the nose and chin.

Christina Televantou (1988, 163; 1992a, 61) has already noted that the profiles and facial features of the figures from Xeste 3, which she attributes to the 'Master of the Saffron Gatherers', are similarly rendered, and that, moreover, the facial features of the female figures are rendered by means of identical brushstrokes (Televantou 1992a, 61).

In the accompanying Figures, the arrow shows the flip or rotation of the working curve when it is applied to other figures.

1.1. The 'curve of the nose' (Fig. 1). In order to compare the curves of the nose we chose the nose of the boy (Fig. 1i). The working curve fits with that of other noses, either rotated (Fig. 1j), flipped horizontally and rotated (Fig. 1k-l), or flipped vertically and rotated (Fig. 1a-c, e-h).

The working curve may be larger or smaller in size than the curves examined on other figures, but the section that fits always fits perfectly. The same applies in all comparisons of the fixed curves seen in the following examples.

A notable feature is that the nose consists of two separate curves which do not meet: the curve from the top of the forehead to the tip of the nose, and the 'curve of the nostril' to the upper lip (Fig. 2). It seems that this constitutes a rule in the Thera wall paintings. It is worth noting that this feature also occurs on the wall painting of the so-called 'Mykeniaia' from the Cult Centre of Mycenae (Fig. 3). It is probably a point of reference for the organisation of the composition of the figure. That it may be connected with the use of a device for rendering curves cannot be ruled out.

1.2. The 'curve of the chin' (Fig. 4). As a working curve for the chin, we used the outline of the boy's chin (Fig. 4i). The curve is S-shaped, and fits with all other chins if rotated (Fig. 4a, c, j), flipped horizontally and rotated (Fig. 4b, d, f, g, h, k), or flipped vertically and rotated (Fig. 4l).

2. Curves of the body

2.1. The 'curve of the monkey' (Figs. 5, 6, 7). For the first example, we used as a working curve part of the outline of the monkey in the composition of the 'Goddess of Nature' (Fig. 5a). It includes the back, the buttocks and the greater part of the tail.

The yellow marks show the part of the outline which fits with the working curve. Sections of the working curve fit perfectly with a number of examples:

- Monkey on the wall painting of the 'Goddess of Nature': 1) contour of the calf of the bent leg (Fig. 5b); 2) contour of the chest (Fig. 5c). Slight clockwise rotation.

- 'Crocus Gatherer' on the wall painting of the 'Goddess of Nature': 1) curve of the back (Fig. 5d), horizontal flip and rotation; 2) the greater part of this curve repositioned also forms the contour of the front part of the figure's torso (Fig. 5e), rotated clockwise.

- 'Crocus Gatherer' (Fig. 5f) on the east wall of the upper floor of Room 3a, Xeste 3: the parallel curved lines of the border strip of the open chemise on the figure's left side. Horizontal flip and anti-clockwise rotation.

- Girl with peplos in the wall painting of the 'Lustral Basin': 1) upper part of the front contour of the skirt (Fig. 6a), horizontal flip and clockwise rotation; 2) upper part of the back contour of the skirt (Fig. 6b), horizontal flip and anti-clockwise rotation; 3) curve of the back (Fig. 6c), slight clockwise rotation; 4) upper part of the line that divides the skirt (Fig. 6d), horizontal flip and anti-clockwise rotation.

- 'Wounded Lady' in the wall painting of the 'Lustral Basin' (Fig. 6e): the curve of the back. Anti-clockwise rotation, almost upside down.

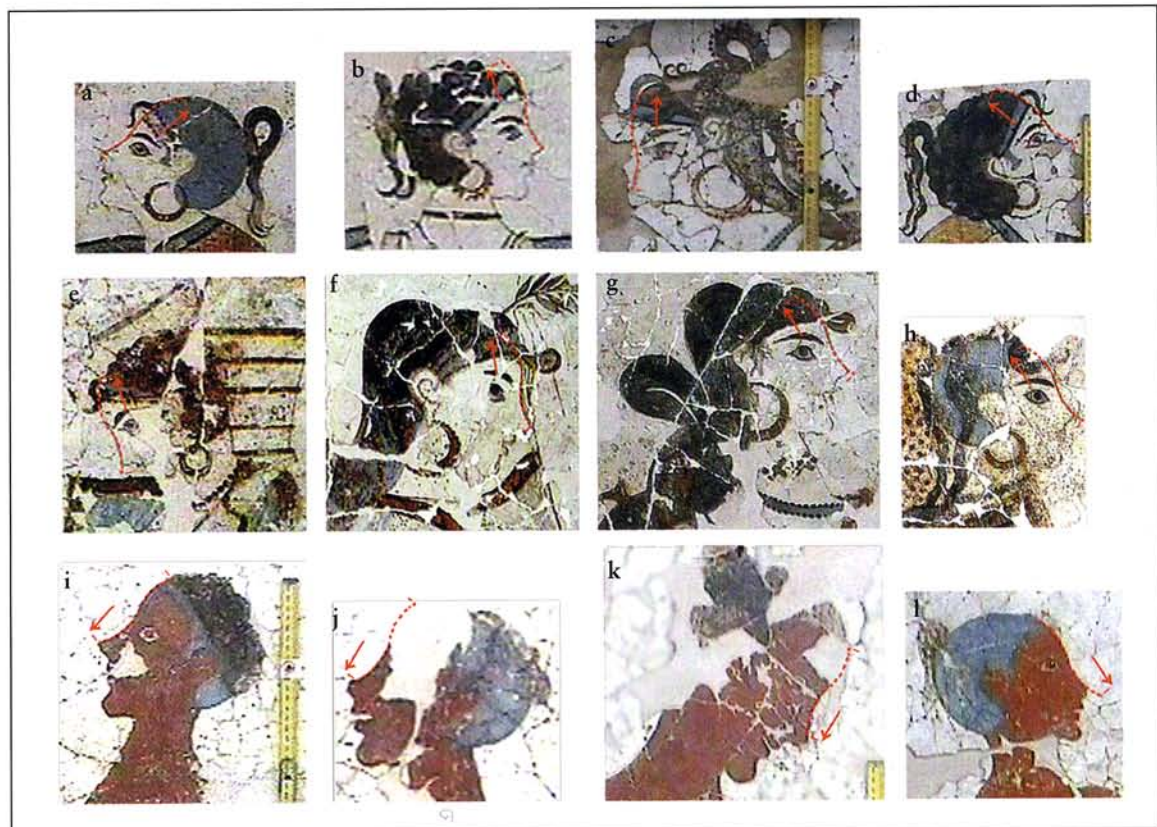


Fig. 1. The 'curve of the nose'. Working curve: outline of the nose of the figure shown in (i). The arrow accompanies the working curve and shows the flip or rotation of the working curve when it is applied to other figures. The working curve fits the outlines of the noses of other figures, flipped vertically and rotated (a-c, e-h), rotated (j), flipped horizontally and rotated (k-l).

Fig. 2. Examples of the drawing of the nose in Thera wall painting. The nose consists of two separate curves which do not meet: the curve from the top of the forehead to the tip of the nose, and the 'curve of the nostril' to the upper lip.



Fig. 3. The so-called 'Mykeniaia' from the cult centre of Mycenae.



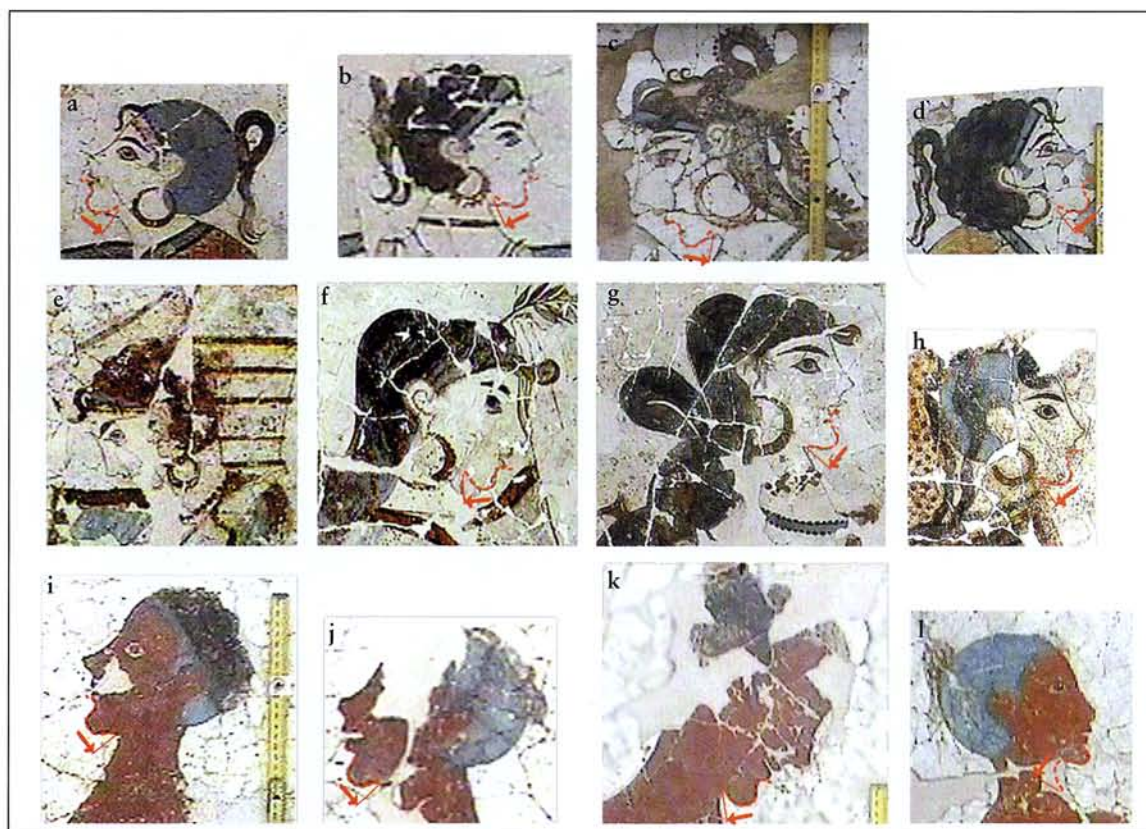


Fig. 4. The 'curve of the chin'. Working curve: outline of the chin of the figure shown in (i). The arrow accompanies the working curve and shows the flip or rotation of the working curve when it is applied to other figures. The working curve fits the outlines of the chins of other figures, rotated (a, c, j), flipped horizontally and rotated (b, d, f-h, k), flipped vertically and rotated (l).

- 'Goddess of Nature' (Fig. 7a): the curve of the border strip of the open bodice. Clockwise rotation.

- Young 'Crocus Gatherer' (Fig. 7b): the contour of the thorax interrupted by the upper arm. Almost upside down.

- Boy holding a bowl (Fig. 7c): part of the curve of the back. Slight clockwise rotation.

- Man holding a jar (Fig. 7d): part of the curve from the neck to approximately the middle of the back. Horizontal flip, slight clockwise rotation.

We noticed that the working curve consists of two distinct curves. This is because part of it was used mainly for drawing the upper part of the torso. In most cases, it forms the curve of the back in figures represented in profile. In the case of female figures whose torso is rendered in three-quarter or frontal view, it forms parts of the open chemise.

2.2. The 'curve of the boy' (Fig. 8). In the following example, we used as a working curve the outline from the neck to the upper part of the boy's thighs (Fig. 8a).

Parts of the curve are identical with the following:

- Boy holding a cloth: 1) contour from the shoulder to the elbow (Fig. 8b), horizontal flip and



Fig. 5

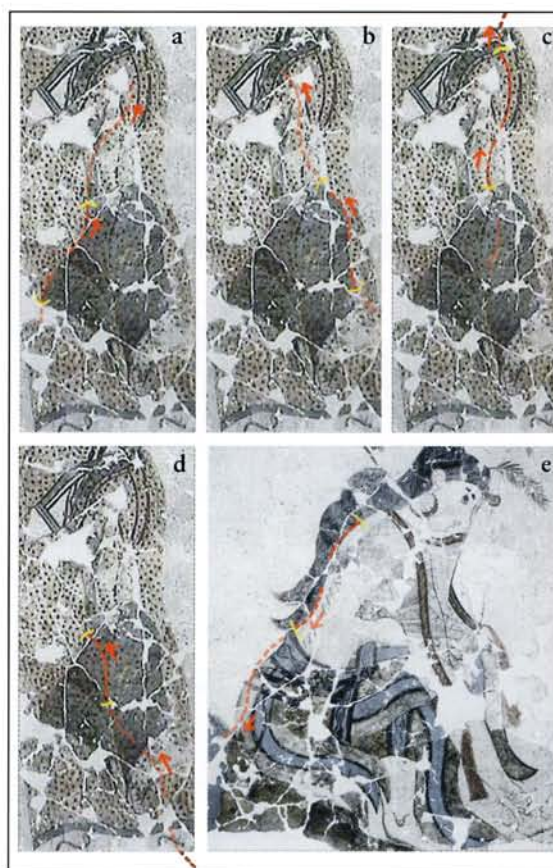


Fig. 6

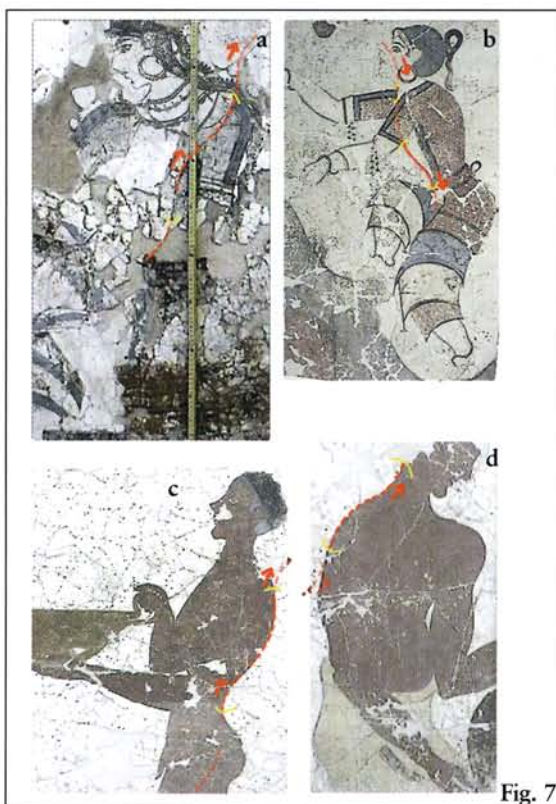


Fig. 7

Figs. 5-7. The 'curve of the monkey'. Working curve: part of the outline of the back, buttocks and tail of the figure shown in 5(a). The arrow accompanies the working curve and shows the flip or rotation of the working curve when it is applied to other figures. The yellow marks show the part of the outline which fits with the working curve.

Fig. 5. The working curve partly fits the outlines of other figures, rotated clockwise (b-c, e), flipped horizontally and rotated (d), flipped horizontally and rotated anti-clockwise (f).

Fig. 6. The working curve partly fits the outlines of other figures, flipped horizontally rotated clockwise (a), flipped horizontally and rotated anti-clockwise (b, d), rotated clockwise (c), rotated upside down, anti-clockwise (e).

Fig. 7. The working curve partly fits the outlines of other figures, rotated clockwise (a, c), flipped almost vertically (b), flipped horizontally and rotated clockwise (d).

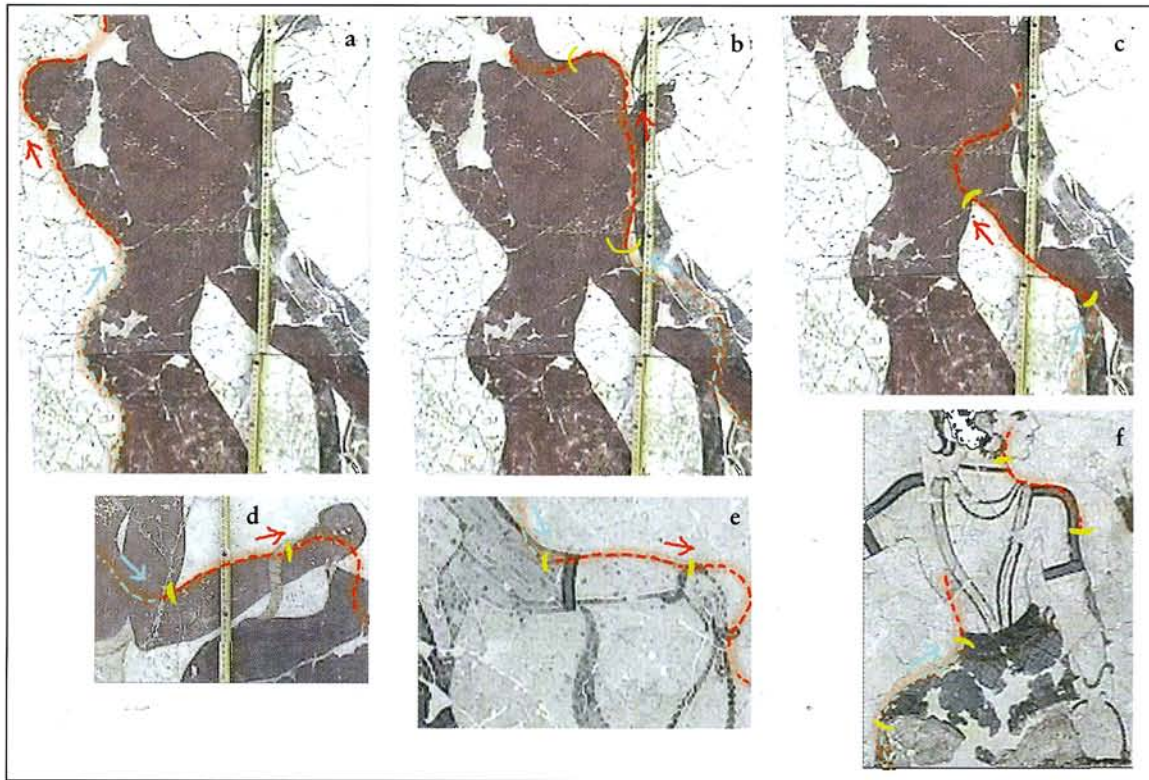
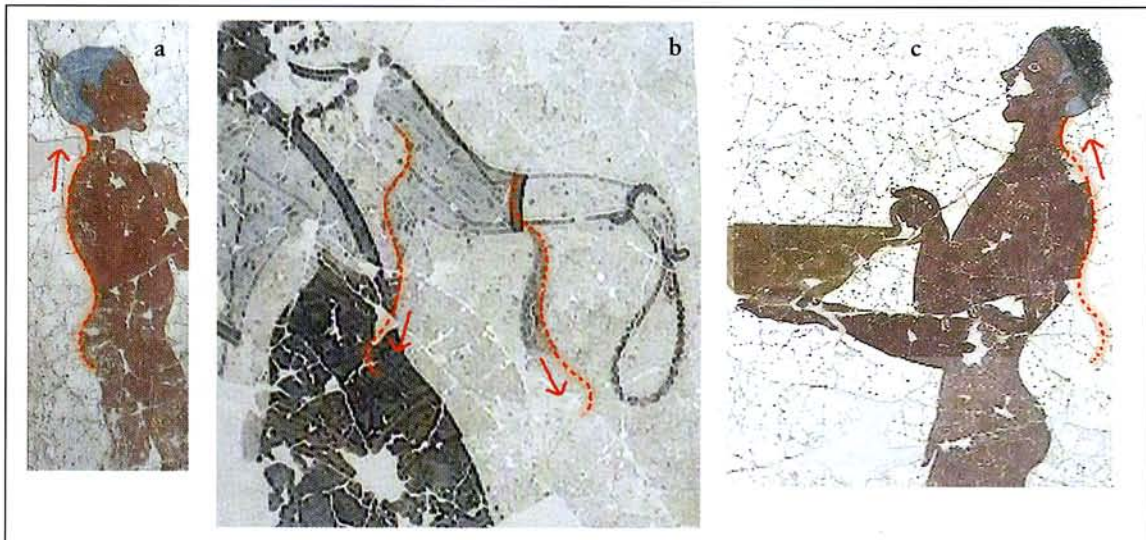


Fig. 8. The 'curve of the boy'. Working curve: part of the outline of the back, buttocks and upper part of the thighs of the figure shown in (a). The arrow accompanies the working curve and shows the flip or rotation of the working curve when it is applied to other figures. The yellow marks show the part of the outline which fits with the working curve. The working curve fits parts of the outlines of other figures, flipped horizontally and rotated anti-clockwise (b), rotated anti-clockwise (c), rotated clockwise (d, f), flipped vertically (e).

Fig. 9. The 'curve of the child'. Working curve: part of the outline of the back, buttocks and upper part of the thighs of the figure shown in (a). The arrow accompanies the working curve and shows the flip or rotation of the working curve when it is applied to other figures. The working curve fits parts of the outlines of other figures, rotated upside down (b), flipped horizontally (c).



anti-clockwise rotation; 2) part of the lower curve of the figure's left forearm (Fig. 8c), anti-clockwise rotation. The part of the curve from the neck to the upper part of the shoulder also fits the equivalent left contour of the figure.

- Man holding a jar (Fig. 8d): the upper curve of the right forearm. Clockwise rotation, almost at right angle.

- Woman holding a necklace: upper curve of the extended forearm. Clockwise rotation, almost at right angle.

- 'Crocus Gatherer' on the east wall of the upper floor of Room 3a: 1) curve of the neck and the figure's left shoulder (Fig. 8e) - only the upper part of the curve is used, upside down; 2) right upper contour of the skirt (Fig. 8f). Only the lower part of the curve is used. Slight clockwise rotation.

It is possible, as shown in the above examples, that the working curve consists of three smaller ones: a) that of the neck to the upper part of the shoulder, b) that of the arm, usually used for rendering upper arms and forearms, and c) that of the waist and thighs.

2.3. The 'curve of the child' (Fig. 9). As a working curve, we used the contour of the back part of the neck to the upper part of the thighs of the child holding a bowl (Fig. 9a).

The curve was applied in the following cases:

- Woman holding a necklace: 1) contour of the breast to the waist (Fig. 9b), upside down; 2) the external curved lines of the tuft on the sleeve of the extended arm (Fig. 9b), vertical flip.

- Boy holding a bowl (Fig. 9c): the back contour of the neck and the upper part of the back, horizontal flip.

2.4. The 'curve of the peplos' (Figs. 10-11). As a working curve, we used the left contour of the peplos on the figure in the wall painting of the 'Lustral Basin' (Figs. 10a, 11a). Parts of it apply in the following cases:

- Girl with peplos: 1) contour of the right forearm (Fig. 10b), slight clockwise rotation; 2) contour of the right forearm (Fig. 10c), upside down.

- 'Wounded Lady': stripe of the sleeve on the right arm (Fig. 11b), slight clockwise rotation.

3. Further examples

Fixed curves also apply in many other cases. The following are some of them:

The forearms of the 'Crocus Gatherer' from the wall painting of the 'Goddess of Nature' are identical, and drawn by means of two separate curves (Fig. 12). These curves (A and B in Fig. 12) are equidistant in both arms, a feature attested in almost all limbs of figures in the Thera wall paintings. It seems that this distance was measured in order to render the figures realistically.

The right outline of the stone vase in Room 4 of the West House, when horizontally flipped, is identical to the left outline, though with a slight inclination.

The outlines of the edging strips on the chemises of female figures always consist of series of curves which are at least in part identical (Fig. 13). The curves of the chemise of the figure in the example shown can be related to the 'curve of the monkey' (see Fig. 5f).

A fixed curve was used for the outlines of the edges of the flounced skirt, as can be seen on the female figure from the wall painting of the House of the Ladies, Room 1, east wall (Fig. 14). In other cases, we have observed that a closed curve is used for the lower edges and an open one for the upper edges. Comparing other curves used in the outline of the same figure, we have observed that: 1) the back outline of the upper part of the skirt is identical (flipped horizontally with slight clockwise rotation) to the front outline of the torso (Fig. 15a); 2) the curve of the breast fits the outline of the hair under the ear (Fig. 15b).

The curves as modules (Fig. 16)

The observations made so far on the other large scale Theran compositions possibly indicate that similar rules and modules applied, and that the same system of curves was used.

In drawing a figure, each part may be regarded as a module consisting of curved lines. These are curves of fixed shape and size which articulate the outlines of figures. The articulation of the curves usually follows the natural articulation of the body. Various positions can be represented by aligning the same curve in different directions and at different inclinations.

In general, curves used to render parts of the body tend to follow a stereotyped shape, even though they may differ in size and curvature from one figure to another. This can be seen regardless of the position or movement of the figures. We can cite a catalogue of curves used as the main structural elements in forming the basic outline of a figure (Fig. 16). Elements of the outline such as fingers, toes, garments and dress ornaments are not included in the following catalogue. These curves are of two shapes: a simple one rather like an open 'U', and a complex one which resembles an 'S', consisting of a large and smaller 'U'-shaped curve.

Curves of the face and head: The outline of the face consists of the following curves:

- the curve from the top of the forehead to the tip of the nose,
- the 'curve of the nostril' to the upper lip,
- the curves of the lips,
- the curve of the chin.

Televantou (1988, 163; 1992a, 61) has already noticed these lines in the figures attributed by her to the 'Master of Saffron Gatherers'.

The outline of the head is formed by one or more 'U'-shaped curves, depending on whether or not it is shaved. The neck along with the shoulders or chest is formed by 'S'-shaped curves.

Curves of the body: Usually, a single 'S'-shaped curve is used to draw the back from the base of the neck to the waist. A similar line is used to depict the front part of the torso down to the waist.

The arms consist of the curves of the shoulder, the two curves of the upper arms and the equivalently shaped curves of the forearms. These curves usually have the shape of a widely open 'U', but when joined with others form contours in the shape of an open 'S'.

A curve from the waist to the upper part of the thighs is used to render the buttocks of male figures, and an analogous curve is used for the abdomen. In female figures similar curves usually outline the area from the waist to the upper part of the skirt, both back and front.

Each leg of the male figures is formed by the two curves of the thighs and the two curves of the calves. In female figures, successive curves in the shape of an open 'U' are used to render the edges of the flounced skirt.

The preference for curved lines is an evident regularity. Curves are also used to render animals, plants, rocky landscapes, shores *etc.*. The curves are united in a sinuous sequence which constitutes a 'system' for the depiction of figures. This concept is completely different from that attested in Egyptian art.

General observations

To sum up, a system of stereotyped fixed curves was used for drawing figures. These could be flipped vertically or horizontally, with a larger or smaller inclination. Through intensive training and dexterity a painter might be able to produce many drawings or curves of very similar shape which look alike but are not identical. However, the curves we examined do not look alike, but are in fact identical. Under this system, moreover, a painter, regardless of dexterity, could make use of a variety of aids, both human and mechanical, ranging from an assistant to paint a less important area to fine brushes or measurements.



Fig. 10. The 'curve of the peplos'. Working curve: left contour of the peplos of the figure shown in (a). The working curve fits parts of the outlines of the same figure.



Fig. 11. The 'curve of the peplos'. Working curve: left contour of the peplos of the figure shown in (a). The working curve fits parts of the outlines of other figure, rotated clockwise (b).



Fig. 12. 'Crocus Gatherer', Xeste 3, Room 3a (first floor), north wall. The contours of the forearms (A and B) are identical and equidistant in both arms.



Fig. 13. 'Crocus Gatherer', Xeste 3, Room 3a (first floor), east wall. The outlines of the edging strips of the chemise are in part identical and fit with the right contour of the upper body.

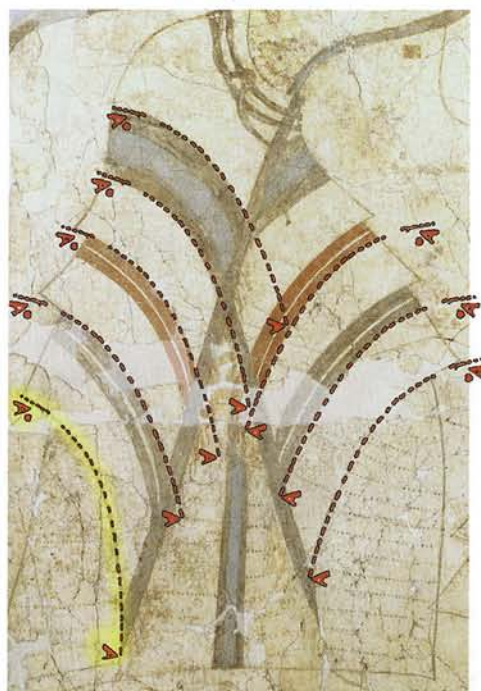


Fig. 14. Female figure from the wall painting of the House of the Ladies, Room 1, east wall. A fixed curve was used for the outline of the flounced skirt.



a

b

Fig. 15. Female figure from the wall painting of the House of the Ladies, Room 1, east wall. a: part of the outline of the skirt flipped horizontally and rotated clockwise fits the front outline of the torso. b: the curve of the breast rotated fits the outline of the hair under the ear.



Fig. 16. The structural curves which form the outlines of male and female figures.

It is difficult to imagine a human hand executing curves, in some cases as much as 25-30 cm. long (for instance, the curves of the torso), and identical in shape and size and with so many different inclinations (from very slight to almost inverted), without the help of some kind of device. This was probably a kind of 'french curve' or, as Professor Bietak suggested in the discussion following this paper, a template.

The next step in our research should be to determine the exact shape and size of the fixed curves, after distinguishing them from the complex curves we have used for comparative purposes.

If we accept that such devices did exist, which seems most probable, this raises the following questions:

- Was each one of the curves executed by a different device?
- Did every painter or group of painters have their own devices?
- Were these devices manufactured especially for one composition or for a group of compositions?
- Were they copied from previous wall paintings?
- Is the system of curves applied in other regions?
- Where can the roots of this tradition be traced?

Perhaps some of these questions will be answered as our study proceeds. Unfortunately, the fragmentary state of preservation of the Cretan wall paintings prevents us from attempting similar comparisons on these.

The use of fixed curves facilitated the organisation of a composition. Furthermore, the painters could control the execution more effectively using what was also a time-saving method. If organised workshops existed, then the effectiveness of less experienced painters could be maximised with the help of such devices.

The scale and the proportions of the Thera wall paintings are in large part the result of the way the curves or selected parts of them are articulated. Through this articulation the painter created figures in various positions. He had previously organised the theme, had decided on the positions of the figures, and had possibly even made a draft of the outlines (Televantou 1994, 352-353). It seems that the painter drew figures following a procedure which started at the upper part. He used the small fixed curves for the faces, the small closed ones for the heads, the larger open ones for the torsos and the arms and their equivalents for the lower parts of the bodies. This modular, step-by-step system of drawing did not allow painters to use a previously specified groundline. Painters adopted various solutions to this problem: the specific way of rendering a rocky landscape, for example, or a slight inclination of the horizontal groundline (as in the wall painting of the 'Fisherman'). By contrast, in Egyptian art figures stand on the groundlines specified by the grid.

Stereotypes presuppose a long-lasting tradition of painting, and mirror the ideology of a society and its conception of the world. A thorough study along these lines will perhaps contribute to a better understanding of the procedure involved in drawing figures and, moreover, help us to achieve an even more valid and accurate reconstruction of Thera wall painting compositions.

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REFERENCES

- CHERRY, J.F.
1992 'Beazley in the Bronze Age? Reflections on attribution studies in Aegean prehistory', in R. Laffineur and J.L. Crowley (eds.), *EIKΩN, Aegean Bronze Age iconography: shaping a methodology. Proceedings of the 4th International Aegean Conference, University of Tasmania, Hobart, 6-9 April 1992*, Aegaeum 8, Liège, 123-144
- DOUMAS, C.G.
1985 'Conventions artistiques à Théra et dans la Méditerranée orientale à l'époque préhistorique', in P. Darcque and J.-C. Poursat (eds.), *L'iconographie minoenne. Actes de la table ronde d'Athènes (21-22 avril 1983)*, Bulletin de Correspondance Hellénique supplément 11, Paris, 29-40
1992 *The wall-paintings of Thera*, Athens
- TELEVANTOU, C.A.
1988 'Η απόδοση της ανθρώπινης μορφής στις θηραϊκές τοιχογραφίες', *Αρχαιολογική Εφημερίς* 1988, 135-166
1992a 'Οι ζωγράφοι', in C.G. Doumas (ed.), *Ακρωτήρι Θήρας: Είκοσι χρόνια έρευνας (1967-1987)*, Athens, 57-68
1992b 'Theran wall-painting: artistic tendencies and painters', in R. Laffineur and J.L. Crowley (eds.), *EIKΩN, Aegean Bronze Age iconography: shaping a methodology. Proceedings of the 4th International Aegean Conference, University of Tasmania, Hobart, 6-9 April 1992*, Aegaeum 8, Liège, 145-159
1994 *Ακρωτήρι Θήρας: Οι τοιχογραφίες της Δυτικής Οικίας, Βιβλιοθήκη της έν Άθήνας Αρχαιολογικής Έταιρείας* no. 143, Athens
- TETSI, P. (ed.)
1990 *Το Βιβλίο της τέχνης ή Πραγματεία περί της ζωγραφικής από τον Cennino Cennini, όπως ήρθε στο φως για πρώτη φορά και με σημειώσεις από τον Ιπτότη G. Tambroni (Le livre de l'art ou traité de la peinture par Cennino Cennini)*, translated by P. Tetsis, Athens