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## A discussion on the construction method of the anthropomorphic clay figurines from the peak sanctuary of Kophinas and its correlations

### ABSTRACT

The peak sanctuary of Kophinas at Mezzolati flourished during the MM III period. A large number of figurines, representations of humans and animals, were offered as votives. Most of the anthropomorphic figurines are male. A clear distinction between two traditions is defined; the naturalistic and the stylized. As all of the figurines are in a fragmentary state of preservation it is often possible to make observations on the way they were constructed. It is evident that the use of the tenon-and-mortise articulation system is generalized in the naturalistic group thus giving the figurine-makers a variety of options to express their ideal human body.

Although studies have shown that some Kophinas figurine-makers were familiar with the techniques of bronzeworking, it is suggested in this paper that some of them were also familiar with the work of ivory craftsmen whose techniques they might have imitated. The possible existence of this string in a broader network of ideas among craftsmen and artists is discussed here, as well as the significance of this connection since ivory craftsmen are dependent on the palaces and Kophinas is a rural sanctuary, away from any so far known palaces.

**KEYWORDS:** peak sanctuary, MM III, Kophinas, anthropomorphic figurines, construction method

The greater part of the anthropomorphic clay figurines from the peak sanctuary of Mezzolati, just under the peak of Kophinas, dates to the MM III period.<sup>1</sup> The date of the figurines was based on the study of the pottery, with which the figurines share the same material, mainly a reddish micaceous semi-coarse clay (Spiliotopoulou 2014). The style and most morphological features of the figurines verify that their production and consumption fall in that same period.

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<sup>1</sup> Nikolaos Platon (Πλάτων 1962/3), Alexandra Karetsou and Giorgos Rethemiotakis (Καρέτσου, Ρεθεμιωτάκης 1995) published reports of the excavations. Karetsou presented a comprehensive study of the sanctuary, its finds and the surroundings (Karetsou 2014). Rethemiotakis has published an article on the figurines (Rethemiotakis 2014) and has also included comments on them in Rethemiotakis 1998. Regarding the pottery and dating of the sanctuary see Spiliotopoulou 2014.



Fig. 1. Naturalistic male figurine, Kophinas.



Fig. 2. Stylized male figurine, Kophinas.



Fig. 3. Stylized figurine, Kophinas.

The Neopalatial art is infused with genuine enthusiasm for the more anatomically correct and naturally rendered human body. A substantial part of the figurines from Kophinas worthily follows in those steps. The bodies of some figurines from Kophinas are highly naturalistic; their creators like to emphasise the chest, the stomach, the spine, but especially the thighs and the gluteal region. The heads and faces are less successfully conjured up, probably because the focal point of the artist is the strong athletic body and its musculature.

However, it is worth mentioning here that not all the figurines follow that trend. Next to the class of naturalistic figurines there stand a considerable number of figurines with more stylized, crude or even abstract features (Figs. 1-3). The dating of the pottery does not allow us to attribute the latter to an earlier date. This latter class of figurines stood next to the masterpieces of Kophinas and was probably executed by old-school masters, less skilled craftsmen, or even by simple folk. They all represented the hopes and the faith of the pilgrims. In this study we will focus mainly on the former class of figurines.

Rethemiotakis mentions that the figurines mimic bronze or faience masters' techniques (Ρεθεμιωτάκης 1998, 136). He recognises bronzeworking techniques in a group of sizeable figurines where the clay cores and successive layers of clay are used. It is our working assumption that the masters of Kophinas were also inspired by the work of ivory masters and their masterpieces regarding their naturalistic and lively images, but they also creatively imitated their techniques and tricks. Some observations pointing in that direction will be presented and discussed here.



Fig. 4. Tenon formed by joining the upper part of the legs, Kophinas.



Fig. 5. Part of base with mortise, Kophinas.



Fig. 6. Torso with detached arms and head, Kophinas.

### THE CONSTRUCTION

The fragmentary state of the figurines has allowed close observation of the articulation, joinery and general construction of the figurines. More than 3,000 fragments have been studied so far. A specific method of construction was applied to most of the male figurines, particularly the more naturalistic ones.

The figurines are mostly compact; their height varies from 5 to 80 cm, in some cases reaching up to a metre. A small percentage of the figurines, the ones that are more than half a metre high, are hollow inside, at least in some of their parts. Practical issues such as optimal firing and the stability of the figure must be sought here.

The order of the steps towards the construction of a compact naturalistic figurine, as far as our observation has allowed us to presume, is as follows: firstly, the legs are formed as cylinders, a bit narrow at the knees, with volume and tension at the calves and thighs. Their upper parts are joined together to form a tenon (Fig. 4). The lower part which corresponds to the extension of the calves also forms tenons. This first model of the lower body is left to dry so that it can support the weight of the upper body. Then the base is constructed and the dried out tenons of the feet are immersed into the soft clay. These leave a pair of cavities, a mold that attests the existence of the tenons (Fig. 5). The head with a coalescent neck is then formed and left to dry. The facial features are most likely added during this stage although probably not always the headgear. The upper body is roughly triangular in shape (Fig. 6); its narrow side is pressed against the large tenon of the legs, thus creating a large cavity that embraces said tenon. The join is then smoothed. Before the clay dries, the tenon of the neck is inserted in the upper part



Fig. 7. Head with neck tenon, Kophinas.



Fig. 8. Visible smoothing of the neck-to-torso join, Kophinas.



Fig. 9. Part of foot with protruding tenon, Kophinas.

of the torso (Fig. 7). Sometimes the figurine-makers, using a finger or a pointed tool or stick, punch a hole in the upper part of the torso for the insertion of the neck tenon. Smoothing follows again, although in most torso fragments the joins are quite visible (Fig. 8). The feet-to-base joins are also covered with a lump of clay which is given the shape of a foot (Fig. 9). The final additions for the completion of the figure are the arms.

The naturalistic rendering owes a lot to this first stage which ensures that the bodily proportions are close to the natural prototype. It owes a lot to the next step as well; adding volume, defining musculature and bone structure. Lumps of clay are added where volume is needed: the chest, the stomach, the gluteal region, the thighs and the calves. The belt and loincloth are added



Fig. 10. Male figurine. Added layer of clay for the rendering of the gluteal region. The upper leg tenon is covered by the belt.

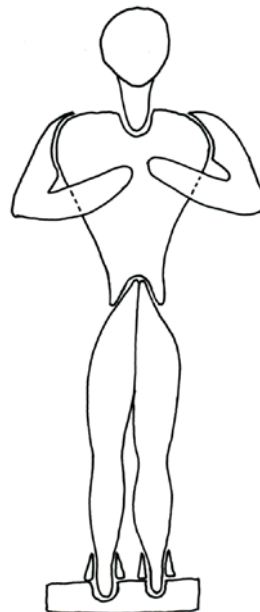


Fig. 11. Parts of a male figurine (drawing).



Fig. 12. Hollow torso of male figurine with square-sectioned tenon, Kophinas.

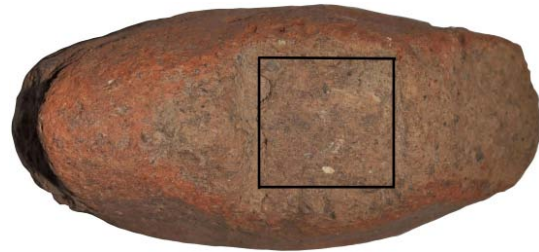


Fig. 13. Detail of 12.

in such a manner that the mid section join is covered (Fig. 10). The necklace similarly covers the neck-to-torso join.

As a result of the aforementioned process, a male naturalistic clay figurine from Kophinas consisted of seven basic parts<sup>2</sup> (Fig. 11) joined by four tenon and mortise systems.<sup>3</sup> Multiple additions are applied for volume, muscles, hairstyles, headgear, facial features, garments and shoes.

Among the figurine fragments there is a large hollow torso of a male figurine with an interesting feature. The neck tenon was broken leaving part of it inside the torso. Its section is square (Fig. 12-13). Square-sectioned tenons are rather unusual for clay figurines and counter-intuitive to the very nature of their material. The function of such a tenon could be the better support of the head while avoiding torsion and consequent detachment. Square-sectioned tenons might be contradictory for clay figurines but not for figurines made of other materials. Square-or rather rhomboid-sectioned are the tenons of the two large feet found at Anemospelia which, according to the excavators, supported a wooden xoanon (Sakellarakis and Sapouna-Sakellarakis 1997, 530ff). However, there is a more obvious connection to an ivory figurine from Archanes (Sakellarakis and Sapouna-Sakellarakis 1997, fig. 817). Only the head is preserved and the neck-to-torso tenon (Fig. 14). Its shape is wedge-like but square in section.



Fig. 14. Ivory head with tenon, Archanes.

<sup>2</sup> Head, torso, hands, legs, base.

<sup>3</sup> Neck-to-torso, torso-to-legs, two feet-to-base.

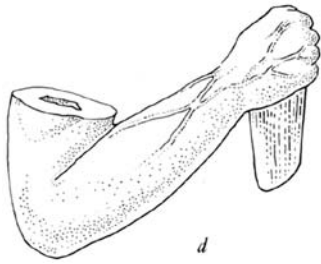


Fig. 15. Part of ivory arm with mortise, Knossos.

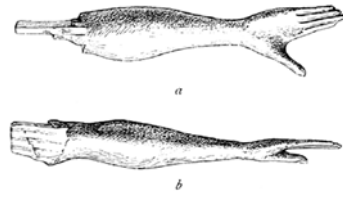


Fig. 16. Part of ivory arm with tenon, Knossos (PM III, fig. 294).



Fig. 17. Part of ivory arm with mortise, Knossos (PM III, fig. 295).



Fig. 18. Lower body of male figurine with loincloth, Kophinas.

A number of Neopalatial ivory figurines in fragmentary state reveal their articulation system with square, triangular or even circular tenons (Figs. 15-17) (Evans PM III, fig. 294, 295). Could it be that the figurine-makers get their inspiration and knowledge from the masters of ivory?

Another interesting observation was made on a small group of male figurines. It seems that on the coarse clay used for their bodies, a layer of fine clay, sometimes of different colour, was applied on certain parts of their bodies. Using two kinds of clay mixture in one object is not a novelty, at least not in Protopalatial pottery. Sometimes in order to join two cups or a handle to the body of a vase, a coarse mixture is applied to make the join sturdier. As far as the clay figurines are concerned this is not a matter of construction. Fine clay is applied

on the Kophinas figurines in order to render the garments. In Fig. 18 fine clay is used on a coarse body for the rendering of a loincloth, while in Fig. 19, that of a short skirt with an oblique opening to reveal the thigh. The latter is referred to as Type B in Sapouna-

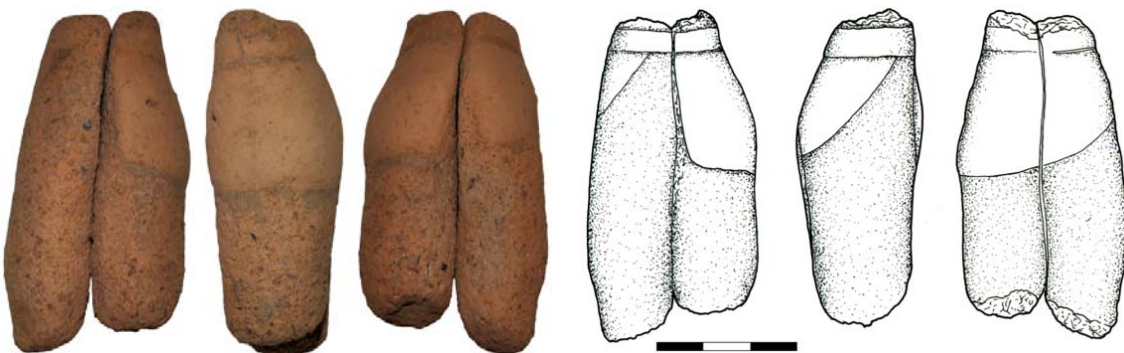


Fig. 19. Lower body of male figurine with type of skirt, Kophinas (19a drawing).

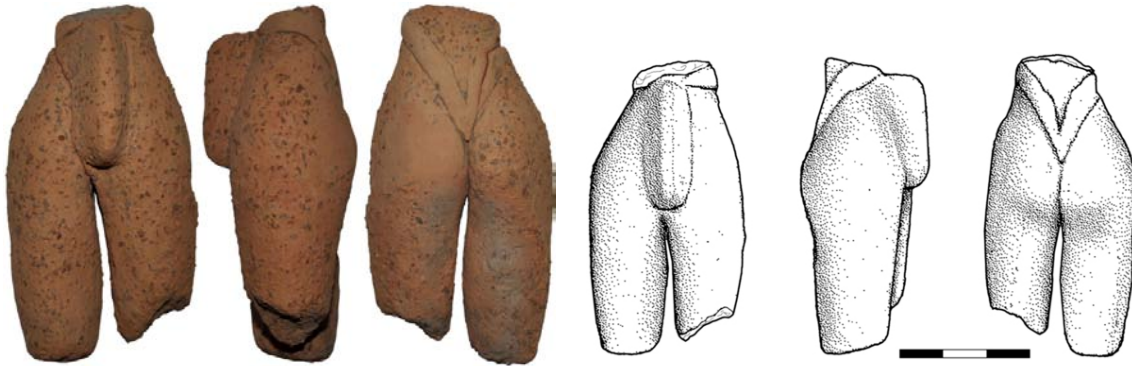


Fig. 20. Lower body of male figurine with deep V in the back, Kophinas (20a drawing).

Sakellarakis' study (Σαπουνά-Σακελλαράκη 1971, 92ff). Another figurine (Fig. 20) wears a special garment with an angular loincloth and a deep V in the back. This type of loincloth might be connected with the athletic character of some of the Kophinas figurines. The fine clay in all of the above figurines is not used for stability; otherwise the practice would have been detected more often. It has one role and that is to denote the garments, to make them distinguishable. The fine clay creates a contrast with the coarse background making the clothes appear lighter in colour. It is worth noting here that most of the figurines have no traces of paint.

But why is it important for the clothes to stand out? If the clay figurines are placed in the same framework as the ivory ones of the same period, the comparison reveals a connection. Many of the fragments of the Neopalatial ivory figurines are said to have probably had golden details.<sup>4</sup>



Fig. 21. Heel of an ivory figurine, Knossos (PM II,2, fig. 455).



Fig. 22. Leg with tenon, Archanes (Sakellarakis, Sapouna-Sakellarakis 1997).



Fig. 23. Leg with tenon, Archanes (Sakellarakis, Sapouna-Sakellarakis 1997).

<sup>4</sup> Such is the example of the Palaikastro Kouros, on which, gold foil was used for the rendering of not only its zoma, but also the shoes and probably two bracelets (Moak 2000, 74-75). Although later than the Kophinas figurines and the ivories from Knossos, it is mentioned here because it follows the latter tradition and it is an example of how the fragments of gold were used.

The size is also a factor that cannot go unnoticed. Some of the larger figurines reach a height of 80cm, and maybe even one metre, while the average figurine measures 20-35cm. The height of the bronze figurines is mostly 5-18cm and rarely taller than 20cm.<sup>5</sup> However, the Neopalatial ivory figurines from the House of Ivories on the Royal Road are estimated to have been 30-40cm in height, while a heel from the South Borders of the palace measures a third or half life-size (Fig. 21) (Evely 1993, 228). These depict athletes, among others. At Archanes, ivory figurine fragments of similar size have been found (Fig. 22, 23), apart from one leg fragment which, according to the excavators, belongs to the smallest figurine in Crete.<sup>6</sup> As far as size is concerned, the Kophinas figurines are closer to the ivory than to the bronze ones. The larger size of the figurines provides a wider canvas for the figure-maker where more details can be rendered.

## DISCUSSION

The human figure is depicted on bone and ivory objects already in the prepalatial and early Protopalatial period. They are all made from a single core, with the exception of an early figurine from the tholos tomb at Haghia Triada that has perforations at the sides for the tenons of the hands (Banti 1933, 191, cat. no. 131, fig. 58m). During the Neopalatial period the arts flourish, as can be attested by works such as the ivory bull-leapers of Knossos and figurine fragments from the Ivory Deposit of the west wing. Along with them foils of gold were found. The figurine of a seated infant, a figurine of a standing child and a head with a tenon at the bottom of the neck were found at Palaikastro. Two heads, parts of arms, and legs with tenons were found at Archanes along with silver and gold foils, and wood (Sakellarakis, Sapouna-Sakellarakis 1997, 707ff). The tradition with the combination of precious materials began in the MM III period, culminating in LM with such a masterpiece as the chryselephantine figure of the Palaikastro Kouros. Evely believes that the introduction of new types of tool and the improved use of old ones contributed to the development and flourishing of figurative art and its course towards naturalism.<sup>7</sup>

The tenon and mortise articulation system played a significant role in ivory craftsmanship. It helped the craftsmen to reduce damage and thus wastage of a precious and rare material by working on separate smaller parts. The tenon and mortise contributed to a more liberated approach of the craftsmen to their products. They could now construct a larger figurine without the restriction of having to work on a single piece of ivory. A larger figurine provides a larger canvas for the rendering of facial and anatomical details thus giving it a natural look. The articulation, which was now controlled by the master, gave them the freedom to express movement, so that their masterpieces could spread in all three dimensions.

The use of tenon and mortise is attested in a fragment of an arm of an ivory anthropomorphic figurine from Chryssolakkos at Mallia which dates to the Protopalatial period (Demargnes 1945,

<sup>5</sup> In May 2015 the largest male bronze figurine found so far was confiscated by the police in Siteia, Crete. It measures 29-30cm in height. Its authenticity has been confirmed.

<sup>6</sup> For the Neopalatial ivories from Archanes see Sakellarakis, Sapouna-Sakellarakis 1997, 707 ff. For the smallest leg see Sakellarakis, Sapouna-Sakellarakis 1997, 710, fig. 822.

<sup>7</sup> Evely 1993, 245, 248. The tool kit consists of a knife, saw, drill, chisel, point and burin, abrasives, etc.



pl. 67.5, pl. 23 a.). The idea of the tenon is certainly not a novelty in the production of clay figurines. It can be seen on some fragments of figurines from Petsophas. It is used to join the upper and lower part of female figurines and the head of some of the larger figurines.<sup>8</sup> The legs of the male figurines, according to Myres, are constructed with a single string of clay, folded in two, then covered by a layer of clay for the rendering of the garment and, finally, the upper body is pressed against the lower part.<sup>9</sup> The feet of the male figurines seem to be pressed against the base, again without the use of tenon,<sup>10</sup> while most of the figurines consist of an upper and lower part. The use of tenons has also been noted in bronzeworking (Verlinden 1984, 190, cat. no 32, pl. 14), although rare, as the final product is generally one solid object.

The production of the figurines from the sanctuary of Kophinas has benefited from the use of the tenon, both in size and in quality. It has provided the figurine-maker with more options thus creating larger figurines, hollow or compact, with more accurate musculature, detailed garments, hats and hairstyles. The step-by-step process of creating some parts, whilst leaving previously manufactured ones to dry, allowed the craftsman ample time to refine the anatomy of their creations.

But what does the imitation of techniques used by ivory craftsmen indicate? The earliest bone workshop is located in Quartier Mu (Atelier de pierres gravées) and dates to MM II/III.<sup>11</sup> During the Neopalatial period all the finds come from the palatial environment of Zakros, Malia and Knossos.<sup>12</sup> Ivory objects have also been found at Archanes, Nirou Chani and Palaikastro. These objects were very rare and precious because their raw material would be imported from the Eastern Mediterranean and Egypt. The workshops that processed ivory were affiliated to the palaces, usually set within the premises, and had materials such as gold and silver, tools and technology at their disposal. Their masterpieces were familiar to a considerable part of their society. They were a focal point of ritual, a beauty standard, and a reason to praise their craftsmen.

The figurine-makers of Kophinas seem to be familiar with these objects and their technique. They are not only trying to imitate the style and morphological features, but also to apply methods that the public is ignorant of but which are a subject of interest among craftsmen. Since ivory workshops are located within the palatial environment and some of the Kophinas figurines-makers –those who follow the naturalistic trend– seem to be aware of some secrets of the trade, it would be reasonable to presume some sort of connection of the latter with the palaces. It is impossible to define the nature of this relation. The issue is much more complex than presented here.

The ivory workshops known so far were found on the north and east coast of Crete, at a significant distance from the highest peak of the Asterousia range. On the other hand, the figurines

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<sup>8</sup> E.g. Rutkowski 1991, pl. XXXII, no. 10.

<sup>9</sup> Myres 1902/03, 362.

<sup>10</sup> Some examples can be seen in Rutkowski 1991, pl. XXIII, nos. 14, 15.

<sup>11</sup> Dessenne 1957, 695. Seals from bone and raw material were found here.

<sup>12</sup> In rooms XLIV and XLVA at Zakros, in the south wing of the palace, raw material, tools and unfinished objects were found. Rooms IV.9 and 10 at Malia are on the palace premises. The House of Ivories next to the Royal Road at Knossos contained, among other things, ivory objects, faience plaques and pieces of gold foil.

and the pottery are made of the same local clay. Some of the pottery shapes found in the sanctuary, such as the “pitharakia”, belong to the Mesara pottery tradition (Spiliotopoulou 2014, 167). If our working assumption of the palatial connection of some of the Kophinas figurine-makers is correct, then one plausible explanation would be that they were craftsmen or workshops that travelled across the island, a practice known among potters in Crete. It is probably still too early for further assumptions to be made.

In conclusion, this paper has tried to reveal one possible connection among craftsmen. A series of observations made on the fragments of the figurines might indicate that the figurine-makers of Kophinas imitated some of the secrets and tricks that ivory carvers used. The generalized use of the mortise and tenon articulation system, one single naturalistic male torso with a square-sectioned tenon, the use of two clays of different composition to make garments stand out, the size and the naturalistic rendering of the human body were some of the findings of this study so far. Although they point in the direction of the ivory workshops and the palatial system, their relations are still obscure. Whether these objects reflect palatial religious propaganda or not, or address elite or non-elite folk, cannot be confirmed. The study is ongoing and will hopefully shed further light on the matter.

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