

Anthropomorphic and Zoomorphic Miniature Figures in Eurasia, Africa and Meso-America

Morphology, materiality, technology,
function and context

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Ritual Technology: An Experimental Approach to Cucuteni-Tripolye Chalcolithic Figurines

Dragos Gheorghiu

Abstract

Among the Chalcolithic traditions of southeast Europe, the Cucuteni-Tripolye tradition displays the most diverse typology of ceramic figurines. This paper presents an experimental approach to understand the *chaîne-opératoire* of the decorated figurines modelled from three modules of clay, emphasizing the structure of the technology of making and breakage. Compared with the structure of rituals, the *chaîne-opératoire* reveals repetitive and standardized actions, which implies a ritualized character of the technologies of making and deconstructions of the figurines. The semiotic of the decoration is also discussed, which also seems to have had a ritual character due to its repetitive and standardized patterns.

Key-words: Chalcolithic; Cucuteni-Tripolye; experiment; *chaîne-opératoire*; ritual.

Introduction

Prompted by the pioneering work of Marija Gimbutas (1974; 1989; 1991; 1999), the figurines of southeastern Europe have become a recurrent subject within the research on the prehistory of the Balkans and the northwestern Black Sea area. Although extensively studied for decades from the viewpoint of iconology (e.g., Marangou 1992; Comsa 1995; Biehl 1996; Monah 1997; Lazarovici C-M. 2005), context (e.g., Lazarovici C-M. 2005), corporeality (e.g., Bailey 2005a; Marangou 2009), or *chaînes-opératoires* (e.g., Gheorghiu 2005; Gaydarska *et al.* 2008), these approaches do not lead to an understanding of the diversity and complexity of the messages contained in figurines (see Lesure 2002; Bailey 1994; Bailey 1996; Bailey 2005a), as we can find in historic and prehistoric times in different geographical areas (see, for instance, Pinch 2006; Cyphers 1993; and Stocker and Otis Charlton 2001).

Methods

One reason for this situation could be that for the most part the approaches of the last decades were based mainly on modern cognitive paradigms, which do not pay much attention to the processes of making, ergonomics, rituality, the modes of manipulation of the figurines, or even to their materiality, when trying to explain the material culture and consequently, to understanding the spirituality of prehistoric populations. My experience with figurines (Gheorghiu 1992; 1996a; 1996b; 1997; 2001; 2002; 2003; 2005) leads me to consider an experimental approach to the relationship between human agency and material which could provide

significant details on the meaning of these ambiguous objects and offer new perspectives for research.

Insofar as the life of traditional societies was ritually structured (see Bradley 2003; 2005), I presume that a *ritualized* (see Bell 1992, 88 ff.) performance was specific also to technologies. Therefore, by experiencing the *chaînes-opératoires* one could understand the ritual significance of some objects from the moment of their creation. For this reason I approach experimental archaeology as a practical tool to examine the technological stages involved in making clay figurines in connection with the human anatomy and the mechanical principles of the human body (i.e. ergonomics), and also as a tool to study the ritualized behaviour of the operator during the making of figurines.

In reference to the above mentioned hypotheses, I will discuss *only* one type of figurine from the large corpus of Southeastern European prehistoric statuettes made of clay, bone, stone, or metal-- the bi-conical, decorated anthropomorphic clay figurines belonging to the Cucuteni-Tripolye Chalcolithic tradition.

Cucuteni-Tripolye: A short description

The production of ceramic figurines in southeastern Europe during the 6th millennium BC was a result of the Neolithic 'package' (Budja 2005; Çilingiroğlu 2005; King and Underhill 2002) with early symbols (see Cauvin 1997) perpetuated and expanded in the Chalcolithic. In this region the subsequent 5th millennium BC is characterised by the emergence of complex societies with social differentiation, materialised in the development of settlements of large dimensions (Marinescu-Bîlcu and Bolomey 2000; Whittle

1996) and a sophisticated material culture (Whittle 1996; Bailey 2000). For the region found between the western Carpathians mountains and the northern Black Sea, social changes are seen in the transformations of the tradition known as Cucuteni-Tripolye tradition (Cucuteni refers to phases A, A/B and B and Tripolye involves phases B I, B II and C I and II) (Dumitrescu 1978; Mantu *et al.* 1997; Ursulescu and Tencariu 2006; *Cucuteni-Tripillia* 2008), at the middle of the 5th millennium BC.

Characteristic of Cucuteni-Tripolye spatial organization are round-shaped fortified villages (Marinescu-Bîlcu 1993) of large dimensions located in the eastern part of the area implicated in the tradition (Tsvek 1996) and the absence of necropolises, a cultural trait which indicates the practice of an off-ground ritual or cremation. Ceramic production was characterized by a high quality painted ceramic elaborately decorated in one, two or three colours, coarse ware and anthropomorphic, zoomorphic and technomorphic figurines (*Cucuteni-Tripillia* 2008; Anthony and Chi 2010).

The clay figurines

Although common cultural traits are to be found in all the Chalcolithic traditions, there is a high regional variability in style within them. This variability is quite visible in the shape and decoration of the figurines (Marangou 1992; Nanoglu 2006; Monah 1997; Bailey 2010), particularly those of two neighbouring traditions, known as Gumelnița-Karanovo and Cucuteni-Tripolye, which used different styles to represent the human body. In both traditions figurine meaning is difficult to understand from a contextual perspective (see Bailey 2005b), because of the random patterns of occurrence in settlements. For example, in Cucuteni-Tripolye settlements, anthropomorphic figurines were discovered in various places such as in and around households (Mantu 1993, 51-52) or in pits (Dumitrescu 1954, 403; Mantu 1993, 51-52). Such variable spatial distribution suggests that the same object had different values in different places.

Two frequent types of clay figurines can be identified in the Cucuteni-Tripolye tradition: the undecorated, with or without anatomical details (such as face features, arms, feet, or sex); and the decorated ones, with bodies adorned with incisions or painted lines. Generally, the decorated figurines (from phases A and A/B) do not display face features, and the arms and the feet are stretched into one conical shape. The occurrence of undecorated and decorated figurines differs according the cultural phase and by settlement (Dumitrescu 1954, 406).

Beginning with the Precucuteni II phase tradition (Marinescu-Bîlcu 1974, 107) and continuing with Cucuteni phase A (Dumitrescu 1954, 403; Mantu 1993, 51), the majority of the above-mentioned types of figurines were fractured (Bibikov 1953; Mantu 1993, 51; Monah 1997, 62). (Fig. 1) Several studies try to demonstrate an intentional process of destruction of objects in prehistory (e.g., Höckmann 1965, 14-23; Chapman 2000; Bánffy 2005; Chapman and Gaydarska 2007), because the controlled breakage of some figurines is in a sense hidden in the

evidence of construction contained within them (Gheorghiu 2005).

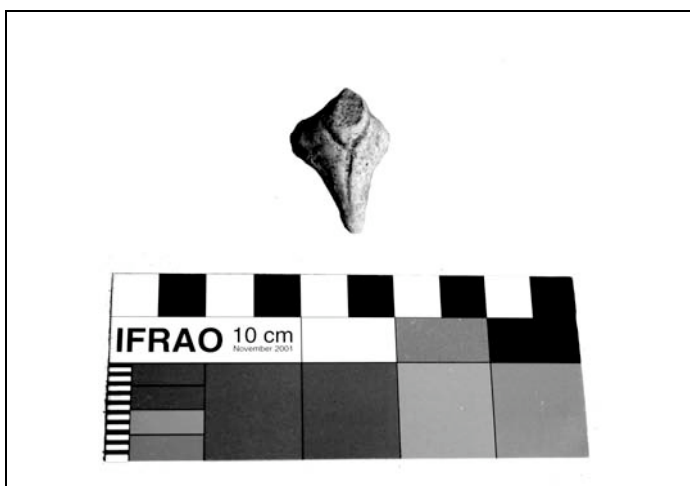


Fig. 1: Broken figurine from an unknown site, Precucuteni tradition (Photo by the author).

The type of breakage of many fragmented figurines could be related to the method of manufacture (see Dumitrescu, H. 1927-29, 81-82; Dumitrescu 1954, 406; Bibikov 1953, 205; Monah 1997, 58-9; for examples outside the Cucuteni-Tripolye tradition see Marangou 1992, 139; Talalay 1993, 30; Chapman 2000, 70-71). For example, the figurines made of clay modules were broken according to some recurring patterns (Marangou 1992, 139 ff.; Talalay 1993, 31; Gheorghiu 2001; 2005).

Chaînes-opératoires

It is this structured way of making and deconstructing the figurines that motivated me to approach the figurines as ritual objects, and the main purpose of this article is to reveal the ritualistic aspects of the figurine *chaînes-opératoires* in order to introduce technologies into the ritual field. This assumption is supported by the evidence that the central constitution of a ritual - seen as a routine, repetitive and ordered behaviour (van Gennepp 1960; Turner 1969) or as a stereotyped and redundant activity (Tambiah 1985)-- identifies it with a technological *chaîne-opératoire*.

The concept of *chaîne-opératoire*, a product of the French school of anthropology (Mauss 1935, Leroy Gourhan 1943/5; Leroy Gourhan 1964/5; Creswell 1976; Lemonnier 1983; Lemonnier 2002), issued from studies of *techniques du corps* or gestures, was not related to ritual. However, in certain technologies with a physical determinism (like the modelling and firing the clay), the *chaîne-opératoire* has a high degree of standardization and routine, and therefore it can be perceived as a technical ritual. Despite the intuitive statements of some scholars like Mauss (1950, 11-12) who stresses that a '*série des gestes de l'artisan est aussi uniformément réglée que la série des gestes du magicien*', the connections between ritual and technology are very vague (for a literature pro and against the analogies between ritual and technical activities see Bell 1992, 143-144, n.6). As a result of repeated experiments in ancient ceramic making and firing, where I experienced the ritual structuring of these

technologies due to the physical constraints imposed by the material and the phenomenon of firing, I believe that technical rituals are a worthy avenue of study and that an experimental approach to them could provide a better understanding of prehistoric material culture. Besides offering a new understanding of the *chaînes-opératoires*, technical rituals could explain the persistence of technological traditions for long periods of time, like the *partonomy* (i.e., the logic of technical conception, following van der Leeuw 2002, 257) of Cucuteni phases A, A/B and B figurines.

A physical constraint regarding figurine *chaîne-opératoire* is the time elapsed during the drying of the clay (Arnold 1997, 22). There is an optimum moment for modelling and joining the clay parts, which determines the speed and timing of the work and compels the technical operations to be an ordered activity. A second constraint, present in the conception of any object, is the memory of the operations (see Norman 1988) that allows an easy reproduction of the modelling gestures as well as their easy transmission. Consequently if a *chaîne-opératoire* is repetitive, ordered and simple, it has the chance to become a technical tradition and a ritual.

Ritual modelling

An initial observation about Cucuteni-Tripolye figurines regards their dimensions, which are influenced by the size and the diverse movements of the hand. A second observation concerns their weird anatomical shape: the figurines have a large pelvic area (the reason why all figurines were labelled ‘feminine’ or ‘androgynous’) and an accentuated curve of the spine, or lordosis, two traits that the experimentation with the *chaîne-opératoire* will try to explain. (Fig. 2)



A statistic analysis of the experiments I carried (Gheorghiu 2005) produced the following standard *chaîne-opératoire*:

- the production of three equal lumps of clay, each large enough to fill a human hand clasped into a fist and modelled with a round movement of the palm (Fig. 3);
- the separate modelling of conical legs and half-pelvis from two lumps of clay by a rubbing movement of the palms (Figs.4 and 5);
- the soldering together of the legs by pressure (Precucuteni tradition), by twisting the pointed end of the two cones (Cucuteni tradition phases A and A/B) (Fig. 6), and by rubbing them between the palms (Cucuteni tradition phase B);
- the pressing of the third lump of clay with the two palms to form the torso;
- the modelling of the contour of the torso by pinching the clay between the thumb and forefinger (Fig. 7);
- the modelling of the head by rubbing the end of the torso between the thumb and forefinger (Fig. 8);
- the modelling of the face by pinching the clay between the thumb and forefinger;
- the assemblage of the whole figurine by pressing the torso (as it is held between the thumb and forefinger) onto the pelvic area (i.e. the larger part of the two legs soldered together) (Fig. 9).

The first stage of the *chaîne-opératoire* helps explain the large dimensions of the pelvic area of male figurines like those from the site of Dumesti (see Bailey 2010, 118-119, fig. 5-4a), and in the last stage, the exaggerated curve of the spine (lordosis). Experiments demonstrate that these crucial technological moments imply the use of force on the surface of the material to solder the parts together. Another index of the use of such force is the pointed end of the legs (which present an extra pointed prolongation on figurines belonging to Cucuteni phase B), designed to enable thrusting the figurine into some soft material. As a result, the shape of these figurines could be perceived as the materialisation of several forces acting upon the malleable clay.

Fig. 2: Broken Side view of an experimentally modelled figurine (Photo by Cornelia Cătuna).

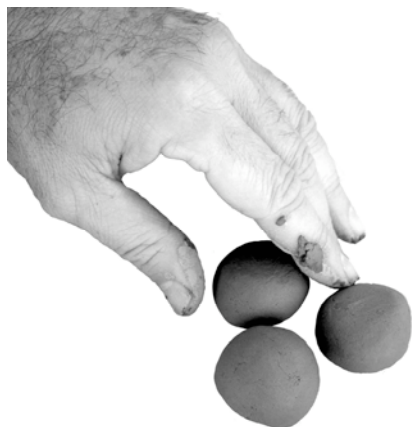


Fig. 3: Three equal lumps of clay used in an experiment by the author (Photo by Cornelia Cătuna).

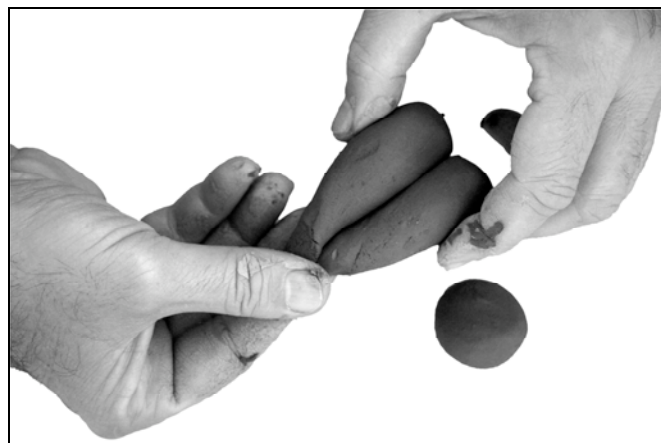


Fig. 6: Twisting the point of the feet during an experiment by the author (Photo by Cornelia Cătuna).



Fig. 4: Experimental modelling the conical legs (Photo by Cornelia Cătuna)

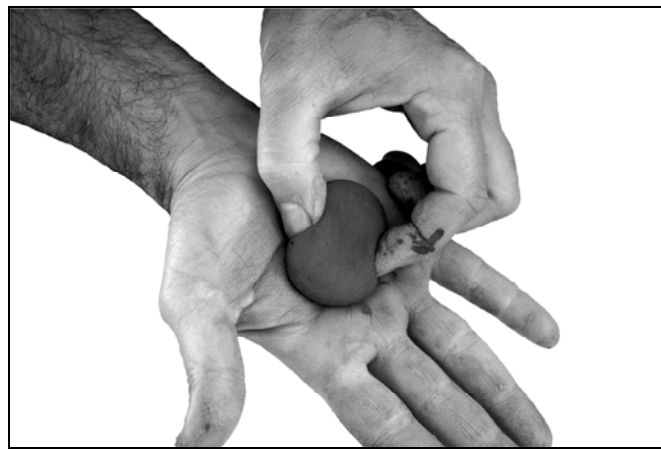


Fig. 7: Forming the torso by pinching the clay during an experiment by the author (Photo by Cornelia Cătuna).



Fig. 5: Experimentally modelled conical legs and pelvis (Photo by Cornelia Cătuna).



Fig. 8: Experimental modelling of the head (Photo by Cornelia Cătuna).



Fig. 9: Final assemblage of the experimental figurine by pressing the torso onto the pelvic area (Photo by Cornelia Cătuna).

For the figurines made of three pieces, the third stage of the *chaîne-opératoire* varies by cultural phase. As a result, in the Precucuteni tradition the small painted figurines (like the set discovered at Poduri) have separately modelled legs soldered by a simple pressure, a procedure which often raised problems after firing, when, due to the tension created in the material, the legs separated along the soldering line (Fig. 10). During the Cucuteni tradition phases A and A/B, this technical problem was solved by rubbing the pointed end of the feet, a procedure improved during phase B by rubbing the entire legs between the palms, which creates the false impression of a single piece for the legs and feet. When the gestures of rubbing were intensified, the shape of the legs and feet were elongated, resulting in a weird anatomical figurine shape serving to enable the figurine's placement in a soft material without altering the proportion of the body.



Fig. 10: Precucuteni II tradition figurines showing the legs separated along the soldering line after the firing process; from Poduri –Dealul Ghindaru, Neamț County Museum Complex, Piatra Neamț. (Photo by the author).

As being the product of a natural set of gestures, the *chaîne-opératoire* of construction was very ergonomic, necessitating simple gestures, easy to be replicated, memorized and transmitted, even orally. This is confirmed by the experiments carried out with children in the village of Vădastra in southern Romania from 2000 to 2005; they remembered the *chaînes-opératoires* of construction and decoration after an interruption of three years. (Fig. 11).



Fig. 11. A figurine made by a 9 year old child from the village of Vădastra after three years from his first experiment (Photo by the author in 2003)

Experiments also reveal the *chaîne-opératoire* of construction has two significant stages for the *control* (Gheorghiu 2005) of the deconstruction of figurines at the place of the application of the forces mentioned above, i.e., the soldering of the legs together and of the torso on the pelvis. This technological moment involves the same gestures of the hands as an activity of sealing.

Working with replicas of Chalcolithic clay stamps (Gheorghiu 2008), I realized the analogies between the two ritual operations: sealing, on one hand, and joining the body parts of a figurine, on the other hand. Experiments demonstrate a relationship between sealing and breaking; for example the pressure applied on dough with a clay stamp produces a firm surface which does not crack easily in time, as compared to the rest of the surface of the unimpressed material. (Figs. 12 and 13) A similar process of strengthening the material occurs at the moment of soldering the figurine parts by using pressure; therefore, these parts do not break but only separate when they are subjected to force intended to produce breakage (Fig. 14).

The breakage or the detachment of parts of a figurine is an easy process as long as a force is applied on some of the weak body points, such as the twisted pointed end of the legs, the thin section of the torso or the protuberance of the head. Such ease of deconstruction may have had a ritual significance too, as suggested by the huge number of broken figurines in Cucuteni-Tripolye tradition.



Fig. 12: Dough impressed with a design using a replica of a Neolithic clay stamp from Maliq (after Gheorghiu 2008, 89, fig.6)



Fig. 13: The stamped part of the dough piece shown in Figure 12, as seen after a period of two years (Photo by the author).



Fig. 14: Modular parts of experimental figurines that were detached by applying force (Photo by the author).

Ritual decoration

The decoration of the entire body, except for their head, was executed with regular, repetitive chevron pattern, alone or in association with parallel lines; this appears to have been the result of a ritual operation. Experiments reveal the difficulty in reproducing this kind of incised pattern with a careful repetitive action, which is characteristic of a ritual activity. Similar attention was given to the incision of spiral patterns on the pelvic or dorsal zones of the figurines of the Cucuteni phases A and A/B, whose meaning probably was related to the twisting of textile fibres.

As in numerous visual representations, chevrons are a diagrammatic illustration for twill plaiting (see Adovasio 1977, 105; 113). I interpret this semiotic message as a sort of ‘instruction’ for plaiting, and reproduced them through experiments (Figs. 15 – 19). The resulting wrapped figurines constitute images similar to that of funerary wrappings in diverse historical agricultural societies. Consequently I propose that this type of figurine could evoke the funerary wrappings of deceased persons or ‘ancestors’ (Gheorghiu 1992; Gheorghiu 1996 a, b; Gheorghiu 1997; Gheorghiu 2003). Some figurines of the Cucuteni phase B display the bindings as painted lines positioned between perforated knobs; in this case, a similar wrapping may be made with a textile thread passed through the perforations according the painted diagram.



Fig. 15: Left, front view of an incised figurine from Târpești, Precucuteni tradition (after Marler 2008, 116; photo courtesy of the Institute for Archaeomythology); right, reconstruction of the pattern of body wrapping (Drawing on photo by Radu Damian).



Fig. 16: Left, dorsal view of an incised figurine from Târpești, Precucuteni tradition (after Marler 2008, 116; photo courtesy of the Institute for Archaeomythology); right, reconstruction of the pattern of body wrapping (Drawing on photo by Radu Damian).

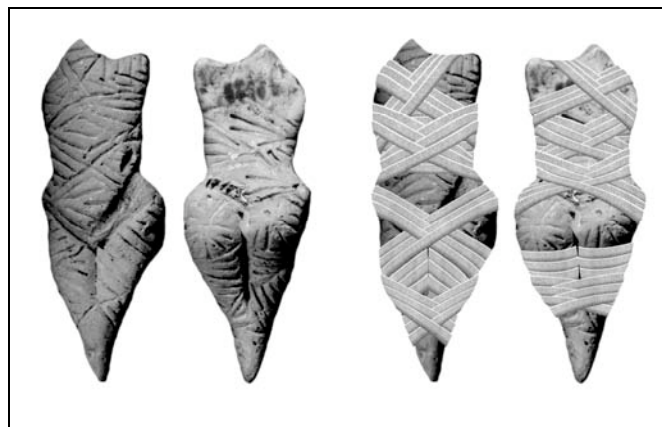


Fig. 18: Left, an incised figurine from Scânteia, Cucuteni tradition phase A (after Marler 2008, 125; photo courtesy of the Institute for Archaeomythology); right, a reconstruction of the pattern of body wrapping (Drawing on photo by Radu Damian).



Fig. 17: Left, an incised figurine from Dragușeni, Cucuteni tradition phase A (after Marinescu-Bîlcu and Bolomey 2000, fig. 159/1; photo courtesy of Dr. Silvia Marinescu-Bîlcu); right, reconstruction of the pattern of body wrapping (Drawing on photo by Radu Damian).

A first argument in favour of the funerary model was the unusual anatomical details of the human body: the emphasised shoulders, the absence of arms and the superposition of the legs (modelled as the twisted ends of the conical feet) are traits which can be observed on the mummified bodies or the skeletons enveloped in vegetal or textile bandages like those in the early Cernica Chalcolithic cemetery, dated to the Boian tradition (5th millennium BC). A second argument concerning their funerary character could be the analogy of spatial distribution between the parts of figurines and the pieces of human skeleton, discovered in pits (Dumitrescu H. 1957, 99, ff.), households (Bem 2007, 252-253) or ‘refuse’ areas (Marinescu-Bîlcu *et al.* 1984, 45-46).



Fig. 19: Left, an incised figurine from Dragușeni, Cucuteni tradition phase A (after Marinescu-Bîlcu and Bolomey 2000, fig. 160/2; photo courtesy of Dr. Silvia Marinescu-Ilcu); right, a reconstruction of the pattern of body wrapping (Drawing on photo by Radu Damian).

Ritual utilization

As the spatial distribution of fragmented figurines does not offer a clear understanding of their role, indirect evidence consisting of the relation between form, function and iconography should be explored.

During Cucuteni A/B and B – Tripolye B-C phases the length of the conical legs of some figurines become greater than that found in normal anatomical dimensions (see *Cucuteni-Tripillia* 2008, 148). This may be interpreted as a solution for a better positioning of figurines on a horizontal surface. The experiments carried out with this kind of figurine demonstrate the efficiency of their shape when fixed to different foods or soils.

A secondary role for the perforated knobs or for the small holes on the figurine bodies may have been to fix them on

different vertical surfaces. One argument in support of this proposal comes from the iconography of the Cucuteni tradition, where a number of vases show figurines modelled on their surface and on the same line with the perforated knobs (Scânteia and Dumești sites, see Monah 1997, 491, fig. 239; 492, fig. 240/1; 493, fig. 241/1), or with impressed clay pseudo-cords (Bârlădești site, see Monah 1997, 490, fig. 238/6). This suggests that in reality figurines were fixed with a textile thread on the vase's surface. In these examples one can identify the type of figurine, either wrapped or unwrapped, with separate legs, belt and necklace that is similar to the set of figurines from the Dumești site (see Bailey 2010, 114-115, fig. 5/1).

There is a recurrent breakage pattern of these figurines that are attached to the surface of vases: (see Monah 1997, 490, fig. 238/ 2,4,5,6; 492, fig. 240/2; 493, fig. 241/1,4; 494, fig. 242/1,3; 499, fig. 247; Diaconescu 2005, 364, fig. 8), the amount of vase wall fragment left around the figurines suggests an intentional cut from the vases' surface (Figs. 20-21). This example points to intentional breakage and probably an additional utilization of the figurines after the destruction of the vase. There is support for this idea that comes from another example of intentional breakage in Cucuteni-Tripolye: the zoomorphic protomes were cut off in a similar way, thus preserving fragile details like horns, which could not have survived if the sherds were the result of an accident.

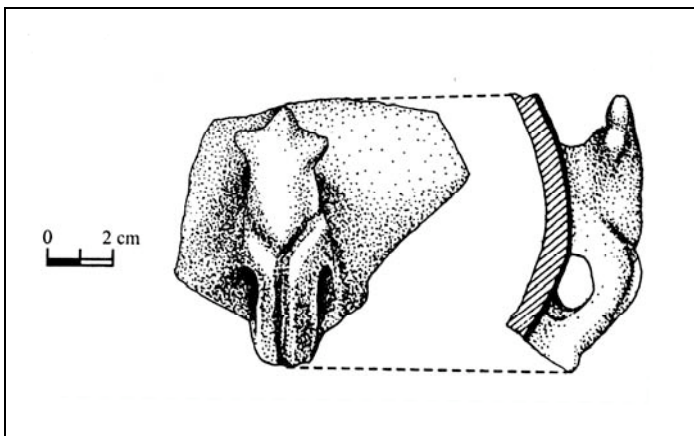


Fig. 20: Fragment of a vase with a modelled figure on a perforated knob, from Duruitoare (after Monah 1997, 497; fig. 245/6), courtesy Dr. Dan Monah.

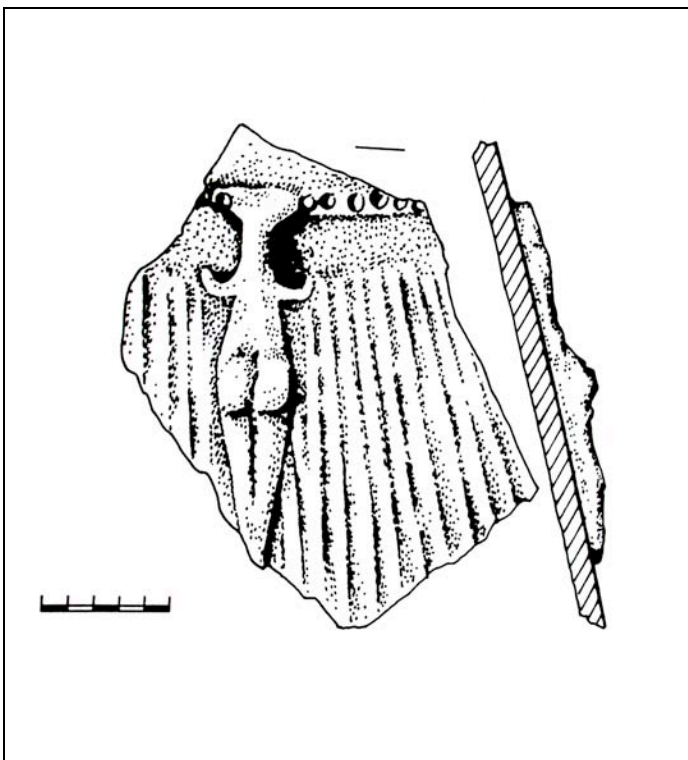


Fig. 21: Fragment of a vase with a modelled figure on false-impressed cordage, from Bârlăești, (after Nițu 1976, 490).

The custom of breaking figurines and their ritual display on different surfaces, as well as their 'binding' may be found in the history of the Near East and Europe, which can be seen as an inspiring ethnoarchaeological model to approach ritual and magical actions using figurines. For example some Egyptian anthropomorphic figurines were used as substitutes for humans in sacrificial rites (Ritner 1993), as love charms or as a substitute for hostile actions against some individuals such as the 'bound' figurines of enemies nailed to outer walls (Pinch 2006, 93). In this ritualistic perspective the 'binding' of figurines could have acted not only as a funerary ritual but also as a ritual method of capturing or controlling a dead or live person by means of magic actions (i.e., binding magic), as shown by the figurines of 'bound' persons found in various cultures of the ancient world (Gager 1992, 205, fig. 23). Binding magic was common among the Semitic (Naveh and Shaked 1985), the Greek (Faraone 1991; see also Flint *et al.* 1999) and Roman (Ogden 1999) worlds.

I believe that the reminiscence of this magical action of breaking anthropomorphic figurines as a substitute for human sacrifice could be found in the rain spell/ritual called *Kaloian* (see Florea-Marian 1994, 323 ff), which is still performed in the villages of the Lower Danube area.

Another inspiring idea based on the historical models cited above could be the semantic relationship between figurines and stamps, which, like the figurines, were studied separated from the rest of material culture. Numerous ancient texts, like the curse tablets and binding spells, focused on the connection of these curious objects for sealing with the action of bounding: "Bound are the demons, sealed are the dews, bound are the idol spirits, sealed are the liliths, male and

female, bound is the evil eye..." (Naveh and Shaked 1985, 173) as stated in an ancient spell. The complex 'binding' of the Cucuteni-Tripolye figurines probably had a composite symbolic meaning, which mixed the funerary symbolism with the basic human feelings of love and hate, like any binding ritual.

Ritual and figurines

The experimentation with the *chaîne-opératoire* reveals a repetitive, standardised activity with a ritual character and also helps to identify the embodied knowledge of the operator through the analysis of the modelling gestures (see Dobres 2000, 152). In any technical *habitus* (see Keller and Keller 1996, 174) such as in figurine production, there is a unity between hand and mind, which is difficult to understand within the Western paradigm of duality between mind and body. In the case of the formation of a *habitus* generated by simple ergonomic gestures, the *chaîne-opératoire* becomes a mental template and therefore an embodied ritual.

Approached from this perspective, the clay figurines discussed here are, in fact, a mental and behavioural pattern constituted from a set of rituals performed during a determined time due to physical and social constraints. In other words, this means that not only the figurines' existence had a social importance, but also the whole process of *revealing* them (which is one of the definitions of technology, following Heidegger 1977, 14), ranging from the evocation of the mental model to its materialization by means of a ritual construction, and up to their ritual consumption. Consequently, to understand the significance of a prehistoric object, it is convenient to begin an analysis from the moment of its conception and follow it until its material annihilation.

Starting from the conceptual relationship which relates anthropomorphic figurines to vases and to the whole human body or to parts of it, as observed in various Neolithic traditions (Talalay 1993, 35; Gheorghiu 2000a, 2000b), another important finding centers on the uniformity of the Cucuteni-Tripolye symbolism and rituality, since figurines, seals and vases (with lids fixed with cords passing through perforated knobs; see Monah 1997, 502, fig. 205) seem to have been the product of comparable rituals.

There are three important ritual stages of the figurines' *chaîne-opératoire* that I would like to highlight in concluding this paper. The first one is the moment of soldering the thorax on the pelvis, which I believe had an important symbolic meaning because it resembles to the gesture of sealing or the symbolic gesture of fixing a lid on a vase or sealing with a clay stamp. All three symbolic gestures could have had a magic significance; therefore I imagine this moment of the *chaîne-opératoire* as being a first magical 'binding' or 'sealing' of a figurine.

The second moment involves incising or painting the surface of the figurine, which consists of a series of repetitive hand movements, akin to a second ritual 'binding'. It is possible that the total wrapping of the figurine body would represent not only a funerary image (the 'ancestor'), but also would

have another ritual quality as the above mentioned historical models suggest.

The third and the final stage is the moment of liberating the energy contained in the bound figurines. This is achieved by breakage, in other words, an activity antagonistic to their creation (Gheorghiu 2005, 142).

Presumably the most important finding from the experimental approach was the ritual aspect of the operations. The partition of the material, the modelling and the incising and painting of decoration indicates a repetitive, rhythmic and consequently standardized movement of the operator's hands. I conclude that the search for the meaning of an object-- beginning with the replication of its *chaîne-opératoire* -- allows the recovery of technological gestures, which are at the same time ergonomic and ritual, and contributes to a better understanding of unnoticed ritual aspects, which in turn may lead to new interpretations.

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