Symbol or Utilitarian? Perspectives on the Function of Two Unusual Artefacts from the Chalcolithic Settlement Isaiia-Balta Popii

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Abstract. The article brings to the attention of both specialists and the general public two clay artifacts, quasi-conical, provided with holes and perforations, discovered in the Precucuteni II–III settlement at Isaiia-Balta Popii, Iasi County. Although objects with similar characteristics are rather rare, the authors have managed to find a few nearly exact analogies. This is all the more surprising as the analogies come from various Neolithic and Eneolithic cultural contexts in Central and Southeastern Europe, giving this object an archetypal character. Establishing its functionality, however, proved to be much more challenging, leading many archaeologists who discovered or approached similar artifacts to easily place them in the somewhat ambiguous sphere of symbolism and cult. Although this interpretation cannot be categorically ruled out, there are arguments supporting a surprising utilitarian functionality, albeit situated, in a sense, within the realm of prehistoric spirituality.


Keywords: Precucuteni Culture, Isaiia-Balta Popii settlement, quasi-conical clay artefacts, functionality.

Introduction

The Isaiia-Balta Popii archaeological site is located in the east-southeast sector of Răducăneni commune in Iași county (eastern Romania). From a geographical point of view, the site is located at the contact between the Central Moldavian Plateau (Culmea Crasnei unit; subunit: Dealurile Comarna – Răducăneni) and the Prut Corridor (common meadow Cozia – Jijia

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– Prut). As a result of the repeated overflows of the Jijia, at the junction between the right slope and the alluvial plain, a stage of fluvial erosion was formed, in some sectors still active, with a relative amplitude of about 3-5 m. Here the pluri-stratified settlement from Balta Popii is located, bounded in the NW–SE direction by two lateral torrents, tributaries of the Cozia stream (Figure 1).²

![Figure 1. Aerial image of the Isaiia-Balta Popii site, view from North-East (Photo by Andrei Asândulesei).](image)

The longer habitation with the most vestiges belongs to the Precucuteni culture of the early Eneolithic; three habitation sequences were identified, from the evolved stage of phase II to the beginning of phase III. The settlement of the Precucuteni culture occupied an area of almost 4000 m²; relatively large groups of stones, deposited (on the Eneolithic ground surface) in piles (two fully researched so far) can be interpreted as "milestones" meant to mark the limit of the inhabited area⁴. So far, 11 dwellings and over 60 pits belonging to this culture were investigated⁵; some of these have been radiocarbon dated⁶. Within these features, over twenty years of excavation, thousands of artefacts made of clay, stone or bone were discovered. Most of them fit into the known typologies of the Precucuteni Culture; however, the small

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² URSULESCU et alii 2020.
³ BOLOHAN et alii 2016, 40; TENCARIU et alii 2019, 83.
⁵ TENCARIU et alii 2022.
Chalcolithic community from Isaia reserved us a significant amount of ‘surprises’, either in the form of ritual features, or of special arrangements within dwellings or of objects with a nearly incomprehensible functionality. This paper focuses on two findings of the latter category, more precisely two quasi-conical objects of fired clay showing certain characteristics that raised problems of interpretation.

The artefacts

The first artifact was discovered in 2018, in pit no. 78, which partially intersected house 14. The complex, quite large in size (2.10 x 3.80 x 0.60 m) was interpreted as a domestic pit, due to the very large number of bones from various animals, Unio shells, fragments of turtle shell, flint artifacts, artifacts from hard animal materials and burnt clay. Stratigraphically, the pit belongs to the upper habitation layer, from the beginning of the Precucuteni III phase; the complex has been radiocarbon dated within 4531-4369 BC range (2σ range). The artifact is almost intact (L = 98 mm; Dmax = 45 mm - Figure 2), except for a chip on the bottom part and a partial detachment of the slip on the dorsal side. It was crafted from a fairly fine ceramic paste, with finely crushed shards in the composition. After the initial modelling, the object was covered with a slip approximately 0.5 mm thick, but the surface was only superficially smoothed. The piece was likely initially fired in a reducing atmosphere, having a dark-grey colour; later, it underwent a brief secondary firing in the presence of oxygen, causing the slip to change its colour to yellowish-red, with grey spots. What sets it apart as unusual are the interventions made on the still soft clay, through carving and perforation. Thus, the piece has two longitudinal holes that penetrate deep into the interior, without communicating with each other. The one on the upper part (E) is quasi-conical, with a rounded bottom (depth = 55 mm, D = 37 mm), probably created by carving. Inside the hole, we note a groove with a width of 5 mm, present only on the wall of the dorsal part, approximately 10 mm below the edge of the piece. The hole on the lower part (F) is cylindrical (depth = 38 mm, D = 9 mm), with very straight and smooth walls, resulting from the insertion and probably the rotation of a thin and hard support (wood or bone). On the upper part of the object, four perforations were made (quasi-circular, with diameters between 4 and 7 mm): three are arranged in a triangle on the ventral side (A, B, C), and one on the dorsal side (D), perfectly aligned with C on the opposite side.

7 TENCARIU et alii 2019, 82.
8 TENCARIU et alii 2022.
9 For the constituent parts and characteristics of pieces of this type, we have chosen the following conventional names: upper part - the half along the length with the larger diameter, which includes the four transverse perforations and the conical longitudinal hole, wider and deeper; lower part - the half with the smaller diameter and a cylindrical longitudinal hole, narrower and less deep; ventral part - the transverse half on which the three perforations triangularly disposed are made; dorsal part - the transverse half with a single hole; A-C - the three perforations arranged in a triangle on the ventral side; D - the perforation on the dorsal side; E - the hole of the upper part; F - the hole of the lower part.
The second artifact was discovered in 2003, in dwelling No. 8, attributed to the second Chalcolithic habitation sequence at Isaiia (Precucuteni II – III). The artifact is fragmentary (L = 112 mm; D = 54 mm - Figure 3), lacking a larger portion from the upper part and a smaller one from the ventral lower part, lost over time. It is made from a coarser paste compared to the first one, using clay with larger granulation (superficially kneaded), with added finely crushed shards. The surface was not covered with slip, only superficially smoothed. The non-uniform colour (various shades, from light yellow to dark brown) indicates firing in a mixed
atmosphere; it shows signs of secondary firing – probably the burning of the dwelling– which likely caused the detachment of some fragments. The holes and perforations are made in the same manner as for the first piece, with a difference in dimensions: the upper quasi-conical hole (E) is 64 mm deep and has a maximum diameter of 40 mm; the lower cylindrical hole is 42 mm deep and has the same 9 mm diameter. Unfortunately, the piece is broken at the locations of perforations A and C, from which only halves are preserved (diameters of 5 and 8 mm); B is missing, and the dorsal perforation (D) is narrower on the outside (3 mm) and wider on the inside (5 mm).

Figure 3. Isaiia-Balta Popii – the second artefact (photo and drawing by the authors).
The analogies

Among the material remains of Neolithic and Chalcolithic cultures, there is a significant number of conical clay objects with longitudinal holes, perforated or not, of various sizes. We were surprised, however, to identify in the literature certain pieces with characteristics (referring to the four perforations) that bring them almost to similarity with the artifacts from Isaiia. Therefore, we will only refer here to quasi-exact analogies, with other types to be mentioned in discussions regarding possible interpretations. The surprise was even greater when observing the very broad chronological and spatial range of the spread of this type of artifact, so we will attempt to present them in a quasi-chronological order.

A complete piece (as per the drawing - Figure 4/2) and several fragments of artifacts (Figure 4/3) very similar to those from Isaiia were discovered in the early 1990s in the Starčevo-Criș culture settlement (early Neolithic, approximately 5950-5400 BC) at Gellénháza10, west of Lake Balaton (Hungary). The intact object is also quasi-conical in shape, with the same characteristics (holes and perforations) and similar dimensions (length of 95 mm; maximum diameter of the upper conical hole, 33 mm; diameter of the lower cylindrical hole, 11 mm). Furthermore, the piece exhibits a kind of groove/ledge inside the upper hole, bringing it even closer to the first object from Isaiia.

Going further, we identified another quasi-exact analogy in the early Neolithic tell from Ovčarovo-Gorata (north-east Bulgaria), a settlement occupied in the interval approximately 5700-5400 BC11. This artefact, from the excavations of the Bulgarian archaeologist Ilka Angelova's between 1974-1979, bears a striking resemblance to our specimens from Isaiia, except perhaps for the lower hole, which, from the photograph, appears wider and not necessarily cylindrical (Figure 4/4). The dimensions (length 99 mm, maximum diameter 51 mm, diameter of perforations between 4 and 6 mm), paste and surface treatment, as well as the number and placement of the perforations make it as an almost perfect analogy.

Other analogies can be found in the settlement of the LBK culture (early Neolithic) at Brunn am Gebirge, Wolfholz, south of Vienna (Austria)12. In 1992, several fragmented artifacts with approximately the same characteristics were discovered here as well. The more complete piece (Figure 4/1) has a rather cylindrical shape, being somewhat longer (140 mm) than our pieces and other analogues. Otherwise, it has the same two non-communicating longitudinal holes (hole F has a conical, not cylindrical shape) and four perforations (three on one side, one on the opposite side). The other three fragmented pieces seem to have the same characteristics. The dwelling 23, from which the more complete artifact originates, is dated in the interval 5460–5360 BC13.

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10 SIMON 1996, 68.
13 KOTOVA 2019, 255.
No less than three such pieces are also found in the Chalcolithic tell at Hotnica (Northern Bulgaria, investigated by Nikola Angelov between 1956-1959 and by S. Chohadzhiev starting in 2000). The settlement has a long history of habitation (almost the entire 5th millennium BC), with Boian-Polyanitsa-Karanovo VI and Kodzhedermen-Gumelnitsa-Karanovo VI cultures being stratigraphically attested. Therefore, although we do not know the stratigraphic position of the specific artifacts, we are broadly situated on a chronological level
closer to the Isaiia settlement. All three pieces (Figure 4/5-7), apparently\textsuperscript{14}, exhibit similar characteristics to those from Isaiia: lengths of 97, 87, and 78 mm; cylindrical or quasi-conical shape; three perforations arranged in a triangle on the upper part.

Getting closer, geographically and chronologically, to the Precucuteni settlement from Isaiia, we encounter a series of objects from the Cucuteni culture, phase A (Middle Chalcolithic).

From the Cucuteni A\textsubscript{3} settlement at Trușești-Țuguieta (Botoșani county), we know two very good analogies for our objects. Regarding the first one (Figure 5/2), mentioned and illustrated in the settlement's monograph\textsuperscript{15} and in the comprehensive work dedicated to Cucuteni anthropomorphic figurines\textsuperscript{16}, we know the following details: it comes from a dwelling, is crafted from coarse paste, and has a length of 135 mm. About the second piece (Figure 5/3), we have fewer details, finding it only in two catalogues\textsuperscript{17}, with photos and catalogue sheets. From these, we learn that the piece is made of coarse paste and has a length of 130 mm. We note that the upper edge is turned inward, and its outer surface is smoother than the other piece.

Another analogy comes from the Scânteia-Dealul Bodești/La Nuci settlement (also Cucuteni A\textsubscript{3}), involving a fragmented piece originating from a pit\textsuperscript{18}. From the published photograph and drawing, both holes and two perforations are evident. The piece is crafted from coarse paste, negligently smoothed, and has a length of 102 mm (Figure 5/1).

Another similar piece was discovered in 1960 at Târgu Berești-Bîzanu, also in a settlement of the Cucuteni A phase. According to the published drawing and the description by the discoverer\textsuperscript{19}, the object is crafted from coarse paste, has all the holes and perforations found in the other pieces, and a length of 125 mm (Figure 5/4).

From the settlement at Ariușd-Tyiszk-Hegy (belonging to the Transylvanian aspect of the Cucuteni-Trypillia civilization, at the same chronological level as phase A in Moldova), there is a quasi-exact analogy for the pieces discussed by us. It is a quasi-conical, complete piece (Figure 5/5), crafted from coarse paste, with a length of 114 mm, having both holes (E-F) and all four perforations (A-D)\textsuperscript{20}.

\textsuperscript{14} We only had access to a frontal photograph, with a scale, from the Ovčarovo monograph (KRAUß 2014).
\textsuperscript{15} PETRESCU-DÎMBOVIȚA 1999, 539.
\textsuperscript{16} MONAH 2012, 217.
\textsuperscript{17} MANTU, DUMITROAIA, TSARAVPOULOS 1997, 210; LAZAROVICI, LAZAROVICI, ȚURCANU 2009, 183.
\textsuperscript{18} LAZAROVICI 2022, 60, 331.
\textsuperscript{19} DRAGOMIR 1967, 45, 53.
\textsuperscript{20} SZTANCSUJ 2015, 53, 582. The photographs of the piece in this article, previously unpublished, were taken and provided by Dr. Sandor Stancsuj (Székely Nemzeti Múzeum, Sfântu Gheorghe), to whom we express our gratitude through this acknowledgment.
Leaving the Cucuteni culture and heading south, but without surpassing the chronological horizon of the Middle Chalcolithic, we encounter several good analogies in both the Stoicani-Aldeni cultural aspect and the Gumelnița culture.

In the settlement at Mălâiești de Jos, Prahova County (Stoicani-Aldeni aspect), in the dwelling No. 6 such an object was discovered, very similar to our pieces. The artifact is also crafted from coarse paste and has a length of 108 mm, with holes at the upper and lower parts, as well as four perforations arranged identically to the cases mentioned above\textsuperscript{21} (Figure 6/1). According to radiocarbon dating, the dwelling where the artifact was discovered operated immediately after 4250 cal BC\textsuperscript{22}.

In the Gumelnița culture, we are aware of two analogies as well. The first one comes from the settlement at Drăgănești-Olt-Corboaica\textsuperscript{23} (Gumelnița B1). Although its dimensions are not mentioned (we estimate the length to be around 90-100 mm) and it is more cylindrical, with slightly rounded walls, still it is very similar to the pieces from Isaiia. Especially noteworthy is a groove made inside the upper hole, exactly like in the case of piece No. 1 from Isaiia (Figure 6/3).

Last but not least, from the tell settlement at Teiu, Argeș County (Gumelnița B1), we mention another artifact of the type discussed above. The object comes from a dwelling, has a quasi-cylindrical shape, it is also crafted from coarse paste, and has a length of 118 mm. Like the others, it has two holes and three perforations on one side\textsuperscript{24} (visible in the photograph and in the drawing, with a fourth likely to exist on the opposite side - Figure 6/2).

**Discussion and conclusion**

From the above, one can notice that we are dealing with an artifact with a special character, determined by its distinctive morphological features. The type has a rather low frequency (under 20 quasi-whole pieces identified), but somewhat paradoxically, it has a very broad incidence in space and time; we are talking about pieces identified from eastern Austria to north-eastern Romania, and from the early Neolithic (Starčevo-Criş, the first half of the 6th millennium BC) to the Middle Chalcolithic (Cucuteni and Gumelnița cultures, the second half of the 5th millennium BC).

\textsuperscript{21} FRÂNCULEASA et alii 2012, 12.
\textsuperscript{22} FRÂNCULEASA 2016, 68.
\textsuperscript{23} NICA, SCHUSTER, ZORZOLIU 1997, 17, 34; PĂTROI, BÂSCEANU 2019, pl. 2/3.
\textsuperscript{24} NEAGU, MĂNDESCU 2011, 91
If a wide distribution of few specimens is intriguing, deciphering the functionality of the artifact is by no means an easy undertaking. Its morphometric characteristics do not indicate a clear practical utility, automatically prompting the temptation to place it in the realm of cult and symbols. But is it really so? Depending on various factors and the interpretations put forth by different archaeologists, we will attempt to decide which direction the balance tips.
In terms of the **discovery context** - where it is known/published - we note that they were found either within dwellings or in household waste pits nearby. However, no case of ritual deposition is documented. This could indicate that it was indeed an object with practical functionality, kept at hand, used, and probably discarded when it became defective.

Observing the quality of the **ceramic paste** and the **forming** and **finishing** of the pieces, we note that the majority are made from coarse clay, hastily shaped, and with surfaces generally treated superficially. Even though there are a few examples of objects made from finer raw materials and which are more carefully smoothed, even slip-coated (such as the one from Isaiia, a specimen from Trușești, probably Hotnica), the first impression is that of utilitarian objects, whose lack of finesse in execution does not hinder their function.

Regarding the **dimensions**, although each piece is unique, their sizes do not vary much. Taking into account their degree of fragmentation, the lengths range from 78 mm (Hotnica, fig. 4/7, fragmented) to 140 mm (Brunn, fig. 4/1), with an average of 100-110 mm. This suggests objects that are easily and frequently manipulable.

Things become more complicated when we consider the interpretation of the artifact **shapes**, combined with the longitudinal **holes** and transverse **perforations**. Their elongated shape, generally quasi-conical (less commonly quasi-cylindrical), has led to an easy association (especially in the Romanian archaeological literature) and their inclusion in the category of **phalli** - symbols of masculinity. Furthermore, the presence of the three perforations arranged in a triangle at the upper part is associated with a schematically rendered human face (eyes and mouth).

For example, M. Petrescu-Dîmbovița, in classifying "**phallic**-shaped objects", describes one of the artifacts from Trușești, as mentioned by us earlier: "The third variant, narrower at the lower end and wider at the upper end, is no longer perforated entirely, but only at the ends... the upper part of a piece being provided with two oval holes (eyes) and a rectangular one (mouth) beneath them; indication of the eyes and mouth contributes to the anthropomorphising of that particular piece" \(^{25}\).

Referring to the object from Scânteia, Cornelia-Magda Lazarovici integrates it into the category of **phallic** type artifacts, with additional anthropomorphic features: "Some artifacts of this type, with holes that suggest a human face, can undoubtedly be considered anthropomorphized artifacts, and we have in mind the ones from Trușești..." \(^{26}\).

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\(^{25}\) PETRESCU-DÎMBOVIȚA et alii 1999, 539.

\(^{26}\) LAZAROVICI 2022, 60.
In the same manner, the other artifacts from the Cucuteni culture are interpreted: Ariușd - *phallus*; Târgu Berești - "...*phallus*, of fired clay, with impressions of chaff, provided with three transverse holes for suspension...".

Also categorized as *phalli* by the discoverers are the artifacts from Mălăieștii de Jos (Stoicani-Aldeni), Teiu (Gumelnița) - "the *phallus* from Teiu is anthropomorphic and recalls the identical artifact discovered in the Cucuteni A3 settlement from Truşești-Ţuguieta"; Drăgănești-Olt (Gumelnița).

Recently, in a synthetic study on artifacts interpreted as *phalli*, a few pieces similar to those from Isaiia are brought into discussion. Although the authors acknowledge that "not everything that is conical/cylindrical and longitudinally perforated is a *phallus* or was used in the context of a sacred ceremony with a *phallic* role" nonetheless, "...holes were made in the body of the piece through perforation, and their arrangement suggests a human figure, which is why these artifacts have been classified as anthropomorphized *phalli*".

Dan Monah, in his well-known work on Cucutenian anthropomorphic figurines, discussing the same category of objects (referring to the pieces from Truşești and Malnaș), does not favour their interpretation as *phalli*. However, he maintains the idea of anthropomorphising.

Within the archaeological literature, the issue of the functionality of elongated objects, perforated entirely longitudinally, has been raised in the past. The hypothesis was put forth that these may not represent *phalli*, as originally considered for all pieces, but rather nozzles for bellows used in copper metallurgy. Of course, this cannot be the case for the discussed pieces, as they are not perforated entirely longitudinally and have transverse perforations, therefore cannot facilitate the pressure and direction of air circulation.

A vaguely similar piece, cylindrical, with two non-communicating longitudinal holes (166 mm in length), discovered in Văleni (Neamț County), was initially interpreted as a torch or a support for attaching a torch to the wall. Later, the same author proposed another theory:

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27 SZTANCSUJ 2015, 576.
28 DRAGOMIR 1967, 45.
30 NEAGU, MÂNDESCU 2011, 81.
31 NICA, SCHUSTER, ZORZOLIU 1997, 17.
32 PĂTROI, BÂSCLEANU 2019, 9.
33 PĂTROI, BÂSCLEANU 2019, 14.
34 Unpublished piece, information from Attila László.
35 MONAH 2012, 217.
37 CUCOȘ 1981, p. 43
the piece could have been used, probably, in a system for rotating vessels during shaping, possibly placed on an axis inserted into the ground, with a circular rotating wooden mass above it with another axis inserted into the top of the piece\(^{38}\). Neither hypothesis is applicable to our pieces. In the case of the pivoting device for pottery, the smaller dimensions and the narrow lower hole would allow for a very thin axis, which would not be able to support such weight. Regarding the torch, the perforations at the top would not be useful for holding a liquid fuel in the upper hole.

Analysing the pieces from Isaiia, the authors of this article considered, based on some ethnographic analogies, the hypothesis that they might be a kind of cache-sexe; however, this idea was quickly abandoned due to their small dimensions and other characteristics that did not support this interpretation.

While interpretations in Romanian archaeological literature almost unanimously converge towards the symbolic realm (phallus as a masculine principle), we find differing opinions in foreign literature.

The more intact or fragmented pieces from Gellénháza are referred to as "pear-shaped clay weights" with perforations for suspension\(^{39}\).

Based on rather vague analogies, such as tables-altars with four legs and anthropomorphic protomas in the centre, R. Krauss interprets the artifacts from Ovčarovo-Gorata and Hotnica as anthropomorphized objects, components of complex artifacts\(^{40}\).

Finally, a very reasonable interpretation\(^{41}\) is offered by Austrian archaeologists who investigated and published the LBK site at Brunn am Gebirge in Austria. They propose the hypothesis that the pieces could actually be musical instruments, specifically a type of flute or ocarina, composed of two parts. The artifacts discussed here would represent the lower part – an upper resonator corpus with finger holes and a lower part in which a wooden stick was inserted as a handle. The upper part, when separated, was a mouthpiece with a blowhole, which could be fixed onto the resonator\(^{42}\). As far as we know, no clay object with such an appearance has been found, so it can be argued that it might have been made of other materials that did not withstand the test of time (such as wood or resin). One of the mentioned authors, Beate

\(^{38}\) CUCOȘ 1999, 73.
\(^{39}\) SIMON 1996, 68.
\(^{40}\) KRAUß 2014, 162.
\(^{41}\) Special thanks to Dr Senica Țurcanu, who directed us to the publication, thus enabling a more appropriate presentation of the Isaiia pieces by identifying analogies and hypotheses unknown in the literature from Romania.
\(^{42}\) POMBERGER, KOTOVA & STADLER 2018, 462.
Maria Pomberger, even conducted some experimental reconstructions of the instruments (Figure 7), producing, recording, and analysing sounds\(^{43}\).

In **conclusion**, considering all existing analogies and hypotheses, we can assert with a fair degree of certainty that the pieces in question are not *phalli*. In comparison to other representations, they do not adhere to the anatomical structure of a phallus, and all other characteristics are not justified in the case of an abstract representation. We also disagree with the supposed anthropomorphising of the pieces based on the arrangement of the three holes in a triangle. Of course, at first glance, there is a sensation of a human face, but this is due to facial pareidolia – the human brain's tendency to recognize faces even in the most abstract forms. Furthermore, this approach to representing the human face is rather contemporary and is not found at all in the "canons" of the epochs in question.

On the other hand, we fully agree with the functionality of the pieces as musical instruments, a kind of ancient ocarinas, although we do not yet have a clear image of the complete object\(^{44}\). This interpretation explains, in a way, both the rarity of the pieces and their archetypal nature, given the very broad spatial and chronological distribution range.

Therefore, the artifacts from Isaiia and their counterparts very likely have a practical functionality (producing musical sounds), a functionality that places them in the fascinating and ever-surprising realm of the prehistoric spiritual universe.

\(^{43}\) POMBERGER, KOTOVA & STADLER 2019.

\(^{44}\) Even though experiments have been conducted based on the pieces from Brunn am Gebirge, we intend to test our own hypotheses regarding the making and use of these artifacts in the near future.
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