

# Technology and functionality of the quadrilobed Wietenberg vessel

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**Abstract:** *The late phases of the Middle Bronze Age Wietenberg culture are characterized by the predominance of good quality and carefully decorated pottery. One of the most remarkable pottery products of this period is the so-called quadrilobed vessel, a lavishly decorated high quality product. The vessel has an odd, lobed shape, not immediately readable in terms of functionality. In addition to its esthetic and technical features, it is also a rare find: it constitutes a small proportion of the pottery discovered in settlements, being even rarely associated to funerary contexts. Although the quadrilobed vessel has received a certain academic attention, it was invariably analyzed as individual find. This paper discusses several recently discovered quadrilobed vessels at the Pianu de Jos – Lunca Pârâului settlement. By using statistical tools, micro- and macroscopic analysis, it will consider the functionality of such vessels, with a focus on the technological and morphological characteristics of the pottery found at Pianu de Jos – Lunca Pârâului site, on the Mureș valley.*

**Rezumat:** *Fazele finale ale culturii Wietenberg (epoca bronzului mijlociu, Transilvania) se caracterizează prin prezența predominantă a unei ceramicii de bună calitate, decorată cu mare atenție. Unul dintre produsele ceramice remarcabile pentru această perioadă este așa-numitul vas cvadrilobat, un produs de înaltă calitate, bogat decorat. Vasul are o formă neobișnuită ce nu dezoăluie la o primă vedere informații în ceea ce privește funcționalitatea sa. Exceptând caracteristicile tehnice și estetice, acest tip de vas este de asemenea o descoperire rară: constituie o mică parte din ceramica descoperită în așezări, fiind chiar foarte rar asociat cu contexte funerare. Deși vasele cvadrilobate au stat într-o anumită măsură în atenția cercetătorilor, au fost invariabil analizate ca descoperiri individuale. Această lucrare discută descoperirile de vase cvadrilobate din situl de epoca bronzului de la Pianu de Jos - Lunca Pârâului. Prin utilizarea instrumentelor statistice, a analizelor micro și macroscopice, studiul urmărește funcționalitatea acestora, cu accent pe caracteristicile tehnologice și morfologice ale exemplarelor de la Pianu de Jos - Lunca Pârâului, pe valea Mureșului.*

**Keywords:** *Middle Bronze Age, Wietenberg, pottery, quadrilobed vessels.*

**Cuvinte cheie:** *bronz mijlociu, Wietenberg, ceramică, vase cvadrilobate.*

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## ◆ Introduction

This study aims to determine the functionality of a particular pottery type, the quadrilobed vessel, belonging to the Middle Bronze Age Wietenberg style. As a case study, I chose to examine in a detailed manner all the specimens discovered at the Pianu de Jos - Lunca Pârâului site. The ceramic studies dealing with the Middle Bronze Age in the Carpathian basin are not entirely rare but often lack in quantitative assessments, focusing on selections of material. In contrast, this analysis of the quadrilobed vessels represents only a small part of a more detailed study on the entire assemblage of Middle Bronze Age ceramics discovered at Pianu de Jos - Lunca Pârâului site.

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### ◆ The assemblage

The Wietenberg pottery style emerges in the Transilvanian plateau as a dominant Middle Bronze Age material culture. The material culture consists of short-term settlements, cremation graves in relatively small cemeteries and intricate pottery decorations - a wide variety of repetitive spiral and meander motifs.

The few, namely six radiocarbon dates range between 1950 and 1400 BC, falling into the general chronology of the Middle Bronze Age in Romania, which is 2200-1500 BC (Al. Vulpe 2010). The internal periodization of the so - called "Wietenberg culture" is also quite a problematic topic still debated. Some researchers recognize three phases of evolution (K. Horedt 1967; N. Chidioșan 1968) while others have observed four (N. Chidioșan 1974; I. Andrițoiu 1978; N. Borroffka 1994). Based on a series of stratigraphic considerations, this study has adopted the division into four phases of evolution.

The core sample for the analysis of the quadrilobed type Wietenberg vessels (fig. 1) consists of the discoveries from Pianu de Jos - *Lunca Pârâului* site (P. Damian *et alii* 2013), excavated in 2012 during the construction of road infrastructure along the Pan - European Corridor IV (A1 Highway Orăștie - Sibiu, section 1 Orăștie - Sebeș). The site is located on the left terrace of the Pianu creek (tributary of the river Mureș), downstream, at about 600 m from the Sibișeni village. It occupies an area of over 2.5 hectares. Preventive archaeological research have documented the existence of both habitation features (two surface dwellings, fireplaces, outdoor platforms made of river stones and pits) and a series of cremation and inhumation graves, dated to the Bronze Age.

So far, the results of the archaeological field research were only minimally published in the excavation report. The analysis of all Bronze Age features and material assemblages constitute the Ph.D. subject of this article's author.

### ◆ Analysis of the quadrilobed vessels from Pianu de Jos – *Lunca Pârâului*

Following the primary statistical analysis carried out on the entire assemblage of ceramic material, I observed that the presence of the quadrilobed vessels was of only 2%. This small percentage shows that this particular type can be regarded as a rare find: from over 1500 determinable forms, I identified only 38 fragments and parts of the aforementioned vessel. Concerning the fabric of which they were produced, based on microscopic analysis (x20), the quadrilobed vessels are always part of the fine ware category without exception. The fabric contains inclusions (P.M. Rice 1987, 411-413) of fine and medium sand with dimensions of less than 1.5 mm. These inclusions are sparse (3-7%), subangular-subrounded (SA/SR) according to the guidelines provided by the Prehistoric Ceramics Research Group (PCRG 2010). Also, the fabric is not easily scratched, it has a smooth texture, and the fracture breaks are fine-irregular.

For the construction of these vessels with obviously a less common form (N. Borroffka 1994, type TE1c, p. 157; L. Dietrich 2014, B5, p. 53), the technique called *au columbin* has been used. On a flat round base were overlapped clay coils with varying diameters. This technique is visible due to the fracture of the fragments in a straight line along the interfaces and in a few cases of slight variations in the thickness of the walls. Always four in number, the lobes were constructed starting from the maximum diameter of the vessel, both in horizontal position reducing their size to the top, and in an inclined position, increasing their size to the top (fig. 2).

Before finishing, the vessel surfaces were cleaned by scraping with a sharp tool. In general, both the inside and outside surfaces were burnished by rubbing it with hard tools before it was completely dry. This type of treatment is generally performed for a variety of reasons, including exposure / display, as a glossy surface is more pleasant. Also, the burnished surface becomes to a certain degree impermeable (J.M. Skibo 1992, p. 32). Only five of the 38 fragments show smoothened surfaces, most likely made by hand or with a piece of fabric or leather, acquiring a matte wall.

The techniques used to decorate the quadrilobed vessels are incision and impression. Half of the studied samples are decorated with three bands rising to the top of the lobes and descending slightly to a maximum diameter (fig. 3), made with sharp incisions with triangular section. Visually quite remarkable are the vessels decorated with meander or spiral motifs, which combine incised triangles with bands filled with simultaneous impressed dots (fig. 4). Only two pottery fragments come from pots decorated with oblique groove and impressions. Specific for this type of vessel are the wide bands of shaded or incised triangles, positioned vertically from the base of the vessel by the maximum diameter, where they meet the horizontal decoration. The only vessel with a profile presents such a decoration, and in the area between the vertical bands were placed circles made up of three incised lines inside with two rows of other incised lines positioned in the shape of a cross (N. Boroffka 1994, typ. 18, 19). The two X-ray fluorescence analysis (XRF) made on what could be considered as encrusted white paste actually showed the presence of a natural soil residue.

The process of firing occurred in both oxidizing and unoxidizing environment (B. Velde, I.C. Druc 1998, p. 122-126). Colours vary from black and gray to different shades of brown. Traces of burning, blackened areas are often visible on the surface of fragments, but their interpretation remains uncertain - this could be a consequence of the position of the pots during firing or it may suggest their use directly over the fire. Also the fact that two shards of the same vessel show totally different colours indicates a pre-abandonment breakage.

Another important remark, also observed through macroscopic analysis is that the only two bottom shards of the entire assemblage show no visible traces of use.

Excepting the morphological performance, the analysis of function and use relies also on the characteristics of the archaeological context. The 38 fragments of quadrilobed vessels from Pianu de Jos - *Lunca Pârâului* were discovered exclusively in pits (features no. 18, 35, 37, 71, 99, 100, 112, 116, 129, 142, 181, 211, 216, 238, 243, and two passim) in association with a variety of ceramic forms. However, this is not a valid situation for other sites; for example, there are some cases in which the actual use of a quadrilobed vessel is that of a lid serving to cover a funerary urn (I.H. Crișan 1970, fig. 6, p. 140).

### ◆ Conclusions and perspectives

Most likely, this type of vessel functioned as a container for various solid or liquid offerings, being used during ceremonies or social events. As well, these pots might be linked to particular users, performing a role as display of identity and status.

Along with the form, decoration and surface treatment, all the other features – size, capacity/volume, content accessibility (it provides relatively easy access to the contents), stability (the bottom size is small when comparing to the maximum diameter and shape of the vessel) and transportability – suggest among other things, an occasional use of this type of vessel. Moreover, the degree of complexity in terms of manufacturing technology of such a ceramic container is very high, which suggests the action of an experienced potter. As a

community member, the potter combines rules and relevant variables in the whole process of producing such a vessel. His or her decisions are guided by technological traditions on how it should be made, how it should look and the purpose it should serve. The action of producing a quadrilobed vessel is very demanding. It requires a set of special skills for constructing thin walls without large variations in thickness, the curved lobes and a complex decoration free of retouches, which is not always available in case of an apprentice (S. Budden, J. Sofaer 2009, p. 207). Most probably, the quadrilobed Wietenberg vessels are the products of experienced potters who had a high degree of technical non-discursive knowledge (Ibidem), capable of mastering complex shapes and intricate decorations to a high standard. Also, their distinctive competences could ensure the continuity of production of distinguished objects.

To conclude, considering the existing arguments regarding the relationship between the fine ware and a dominant need to express identity and status in the Bronze Age (S. Budden 2008, K. Michelaki 2008, T. Earle et al. 2011, p. 428), it is likely that the manufacture of the quadrilobed Wietenberg vessel could be related to a specialized production of "prestige" objects, possibly involved in confirming and strengthening the social status, at least visually.

The analysis of this type of vessel and of the entire ceramics assemblage from Pianu de Jos – Lunca Pârâului site is a work in progress. Therefore, a number of questions related to the technical knowledge required in manufacturing, but also the source of raw materials and the contents of vessels are still waiting for an answer.

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**Fig. 1.** Quadrilobed Wietenberg vessels from Pianu de Jos – Lunca Pârâului.  
Vase cvadrilobate Wietenberg de la Pianu de Jos – Lunca Pârâului.

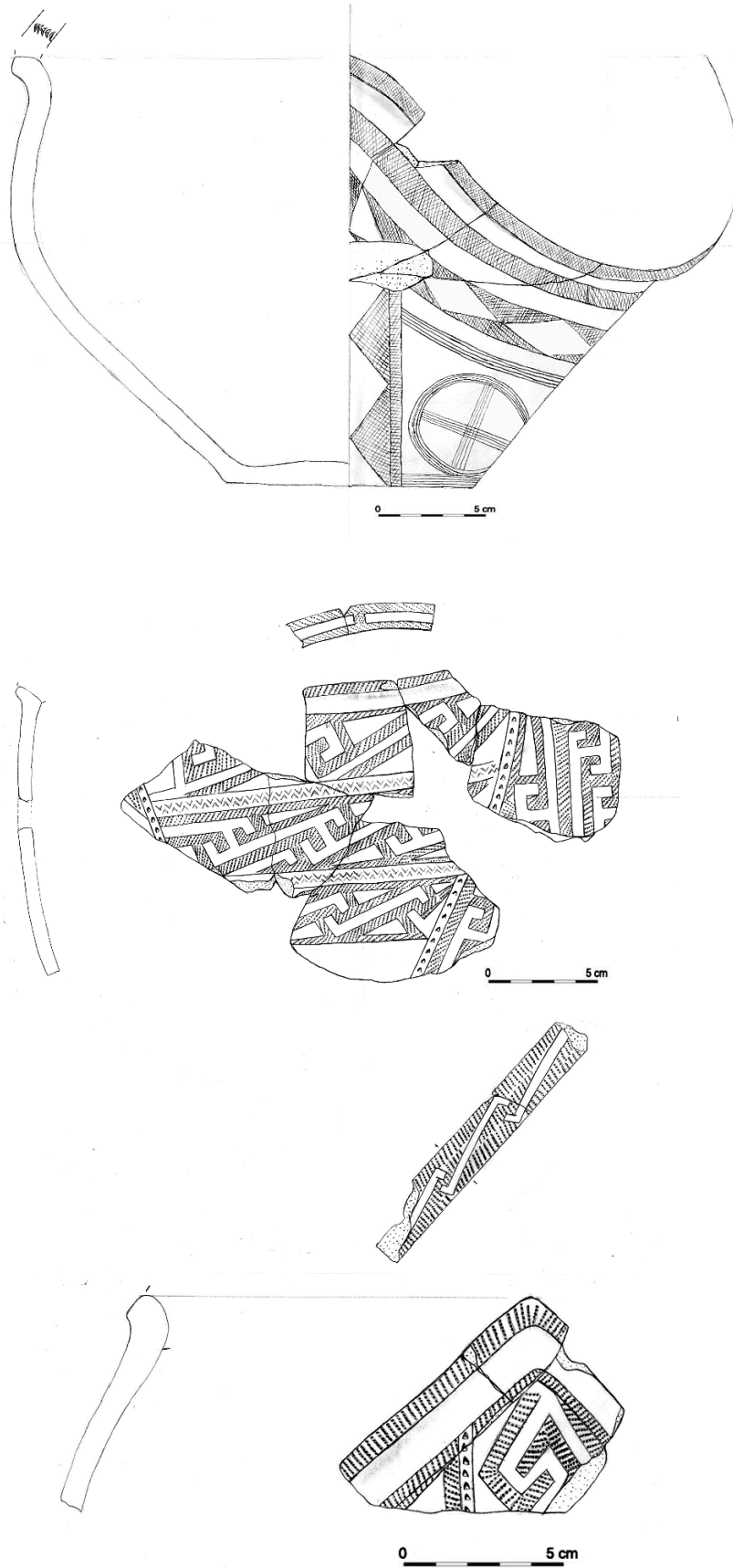


**Fig. 2.** Fractures of the lobes showing the construction techniques.  
Fracturi ale lobilor ce indică tehnicile de modelare.



Fig. 3. Decoration techniques: incision and channeling.  
Tehnici de decor: incizie și canelură.





**Fig. 4.** Intricate decoration with repetitive geometric motifs. Decor complex format din motive geometrice care se repetă.