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A BOLINTINEANU POT FRAGMENT DISCOVERED IN THE NEOLITHIC SETTLEMENT AT VĂDASTRA (ROMANIA)*

GHEORGHE GÂȚĂ, RADU-ALEXANDRU DRAGOMAN

Abstract: In the Romanian archaeological practice, the so-called pottery imports from the (E)Neolithic sites have been interpreted especially as chronological indicators useful for the establishment of time relations between various “archaeological cultures”. In the text herein, based on the case study of a Bolintineanu pot fragment discovered in the Neolithic settlement at Vădastra-*Măgura Fetelor*, we proposed to switch emphasis from chronological relations to the biography of the containers.

Key words: Neolithic; Vădastra-*Măgura Fetelor*; Bolintineanu pot; biography of the containers; Romania.

Rezumat: În practica arheologică din România, așa-numitele importuri ceramice din siturile (e)neolitice au fost interpretate în special ca indicatori cronologici utili stabilirii raporturilor în timp între diverse „culturi arheologice”. În textul de față, luând ca studiu de caz un fragment de vas Bolintineanu descoperit în așezarea neolitică de la Vădastra-*Măgura Fetelor*, ne-am propus să mutăm accentul dinspre relațiile cronologice spre cel al biografiei recipientelor.

Cuvinte-cheie: Neolitic; Vădastra-*Măgura Fetelor*; vas Bolintineanu; biografia recipientelor; România.

Introduction

In general, in the Romanian archaeological practice, pottery fragments decorated differently than those specific to the archaeological contexts of a settlement are interpreted as either pots coming from settlements of certain contemporary “archaeological cultures” or as local attempts to reproduce ornaments of pots acquired by exchange. Commonly, the qualitative archaeological arguments concerning the fabric, colour and decoration are deemed plenty in order to argue that the examined pottery fragments come from other sites. Also the place of origin is investigated “on the whole”, or it is not investigated at all.

Following the excavations of 1956 at Vădastra-*Măgura Fetelor* and *Dealul Cișmelei* (Olt county) (Fig. 1), beside the numerous pottery of the Neolithic occupation, assigned to the “archaeological culture” with the same name, a “Bolintineanu type”¹ fragment was also collected.

Since then, this pottery fragment was mainly used (needless to say exclusively) in narratives related to the chronological reports between the “archaeological cultures”

* Slightly different versions of this text were presented by R.-Al. Dragoman in the Yearly Session of the Bucovina Museum Complex, Suceava, in November 2012 and in the *Pontica* International Session of the National History and Archaeology Museum of Constanța, in October 2013.

¹ Mateescu 1959, 65-66, Fig. 2/2.

Vădastra and Boian². In the text herein, based on technological analysis, we propose to switch emphasis from the chronology theme of the mentioned pottery traditions towards the biography of the Bolintineanu containers.

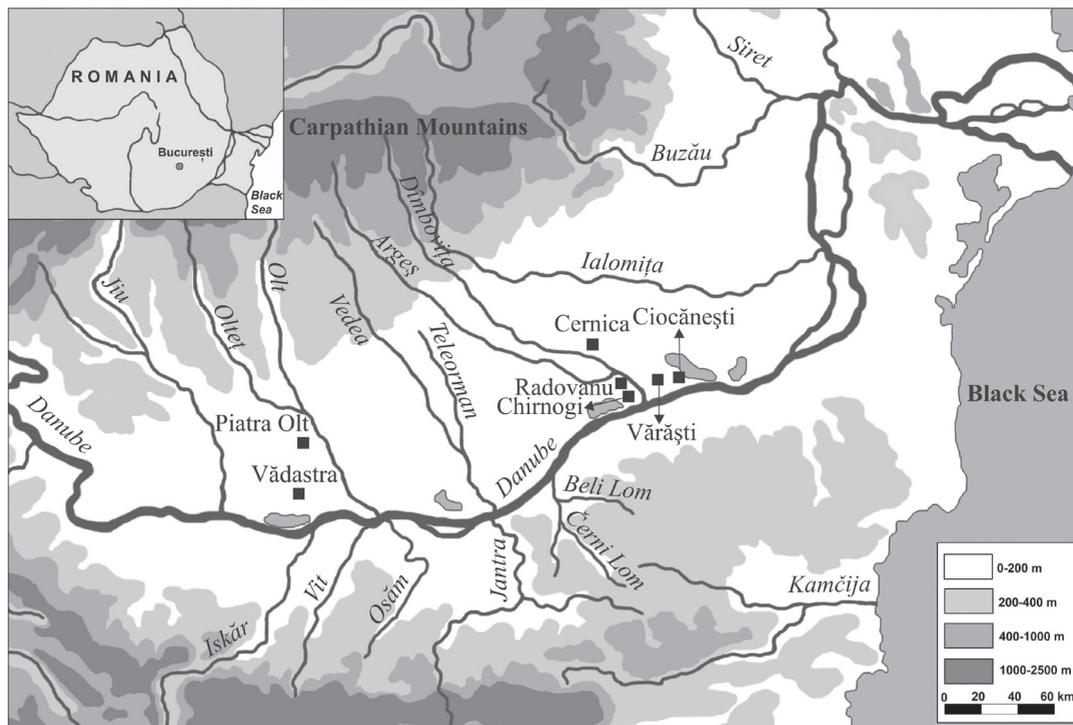


Fig. 1. Map with the locations mentioned in the text.

Analysed materials

The Bolintineanu “import” object of this article is a rim and body pot fragment, of fine pottery, burnished, 4.69 mm thick, 24.61 g heavy and 97 mm in diameter, found in layer Vădastra I, in the pit between squares 12 and 13 dug in the archaeological excavations of 1956, at a depth of -2.00 m (Fig. 2/1a-1b).

For comparison, other three supposed Bolintineanu fragments from Vădastra were analysed, with thicknesses between 7.9-9.9 mm and diameters between 220 and 290 mm, collected from the pit in square 3 South, uncovered in the archaeological excavations of 1971, at a depth of -2.3-2.4 m (Fig. 2/2-4).

The special attention of the cultural-historical archaeology (still prevalent in Romania) for stylistic-chronological assignments resulted over time in the establishment of a contradictory image of the site at Vădastra. Thus, according to Corneliu N. Mateescu, the first Neolithic layer (Vădastra I) is characterised by a fine black or grey pottery with channelled decoration or ornamented with incised bands and dots filled with calcareous white paste, while the second Neolithic layer (Vădastra II) is characterised by a black or brown pottery with incised, grooved and excised decoration.

² E.g. Comșa 1974, 240; Mantu 1999-2000, 85 and 89.

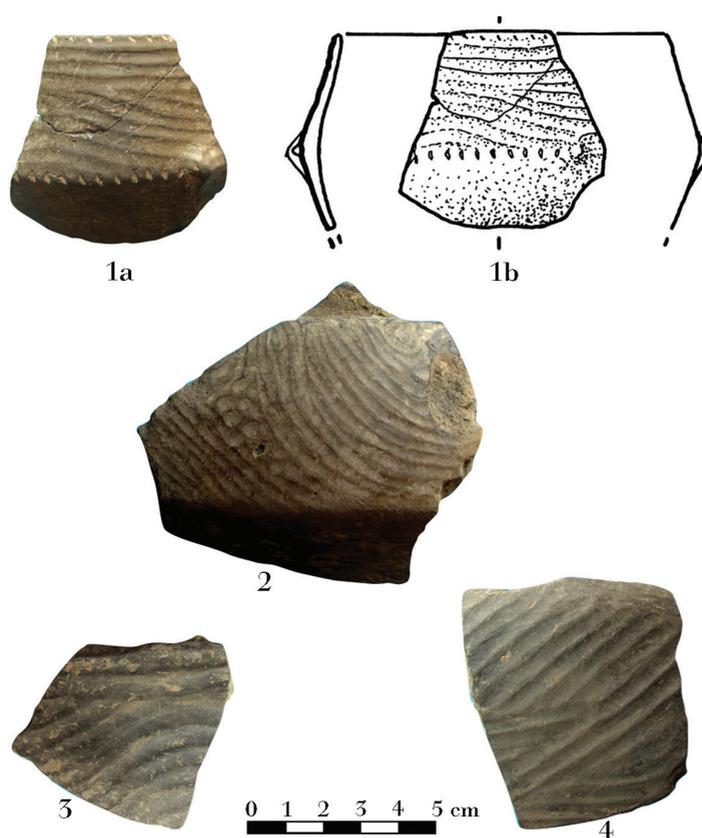


Fig. 2. Pottery fragments from Vădastra with decoration of “Bolintineanu type”:
 1. analysis no. 741; 2. analysis no. 1201; 3. analysis no. 1202; 4. analysis no. 1203.

Therefore, C. N. Mateescu divided the “Vădastra culture” into two phases: Vădastra I (with channelled pottery) and Vădastra II (with incised and excised pottery)⁵. Compared to C. N. Mateescu, another archaeologist, Vladimir Dumitrescu, assigned to the “Vădastra culture” only the materials from the layer Vădastra II, while the layer Vădastra I was catalogued as Vinča-Turdaş⁴. A different framing was proposed by Eugen Comşa, who considered that the discovered materials in the first layer at Vădastra belong in fact to a late phase of the “Dudeşti culture”, contemporary with the Bolintineanu phase of the “Boian culture”, while those in the second layer, to a regional variant of the “Boian culture”, Giuleşti phase⁵.

The Boian materials also had a similar fate. The latter were divided by E. Comşa into four phases - Bolintineanu, Giuleşti, Vidra and the transition phase to the “Gumelniţa culture” -, each with several other sub-phases⁶. Evidently, not all researchers agreed: according to Vasile Boroneanţ, all the materials assigned by E. Comşa to the Bolintineanu phase belong in fact to a regional eastern aspect of the “Vădastra culture”⁷, while for

⁵ Mateescu 1961a; Mateescu 1965.

⁴ Dumitrescu 1968.

⁵ Comşa 1998-2000.

⁶ Comşa 1974.

⁷ Boroneanţ 2005.

Marian Neagu, the Bolintineanu materials do not belong to a phase of the “Boian culture”, but represent a self-contained “culture”⁸.

Given all these divergent framings, in order to determine the origin area of the Bolintineanu fragment discovered in 1956 and of the three supposed Bolintineanu fragments discovered in 1971 at Vădastra, the analysis also included for comparison fragments of black burnished channell-decorated pottery (“Vădastra I”) from the same site, Bolintineanu pottery from Cățelu, Cernica, Radovanu and Ciocănești, and also Dudești pottery of the Cernica phase, from Radovanu⁹. In order to specify the origin of the four pottery fragments we analysed the thickness¹⁰, diameter, porosity¹¹, colour, X-ray charts and certain microelement concentrations.

Thickness and diameter of the pottery fragments

The measurement of the pottery fragments shows that thickness seems to depend on diameter. The greater the diameter, the greater the thickness of the pot walls. In

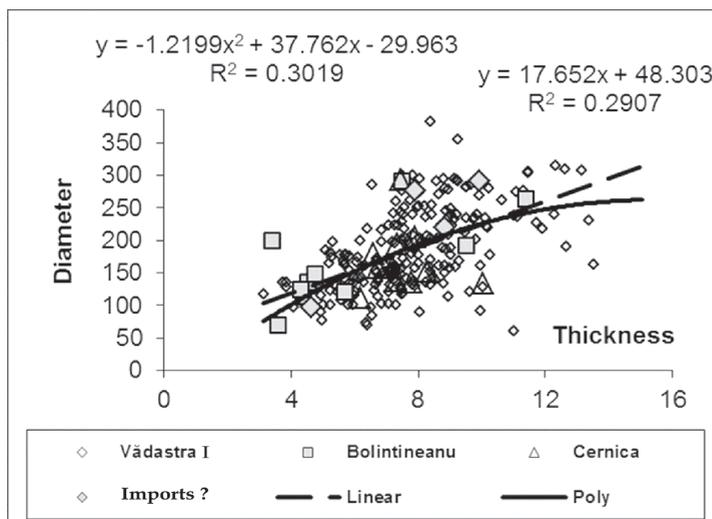


Fig. 3. The ratio between the thickness and the diameter of the analysed pottery fragments.

a diameter-thickness chart, the representative points of the three pottery categories are spread all over the chart and mixed together (Fig. 3), which shows there are no size differences between “Vădastra I” pots and Bolintineanu and Dudești pots in Muntenia.

The technical tolerance of diameter-thickness ratios of pot walls is appreciable with the three pottery categories and it evidences that this proportion was a routine detail disregarded

by those modelling the pots. Still, they comply with a standard, since in the case of “Vădastra I” pottery diameter closely correlates with thickness ($n = 102$, $R_{poly} = 0.549^{***}$, $R_{lin} = 0.539^{***}$, $F = 87.3$). Most likely, the Dudești and Bolintineanu pottery in Muntenia also complies with this peculiarity ($n = 11$, $R_{poly} = 0.878^{***}$, $R_{lin} = 0.865^{***}$, $F = 26.8$). The modelling of this pottery in Muntenia seems inferior to that at Vădastra, especially in the case of the “common” pottery. The areas of Vădastra and Bolintineanu potteries overlap almost along their entire surface, and, therefore, the Vădastra potsherds cannot be distinguished from the Bolintineanu ones.

⁸ Neagu 2003.

⁹ The Dudești and Bolintineanu pottery fragments were obtained by courtesy of Eugen Comșa.

¹⁰ Găță et alii 1997.

¹¹ Porosity was determined by the weight of the pores' volume compared to the weight of the potsherd dried at room temperature and humidity.

The thickness-based pottery distribution in Muntenia (Dudești-phase Cernica at Radovanu and Bolintineanu pottery at Cățelu, Cernica, Radovanu and Ciocănești) is comprised in the “Vădastra I” pottery thickness interval in the eponymous settlement (Fig. 4) and confirms that pot sizes cannot be used to distinguish pottery from different settlements.

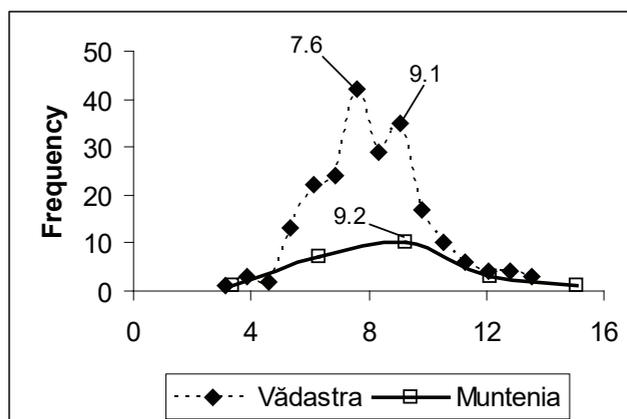


Fig. 4. The distribution of the analysed pottery fragments according to thickness.

Porosity of the pottery fragments

The high variation of the vegetal mass addition accompanied by crushed potsherds as tempering materials recommend the use of porosity to differentiate the pottery in the Bolintineanu settlements from Vădastra pottery. Thus, the distribution of the two pottery categories (Fig. 5) shows that 68% of the pottery in Muntenia has porosity higher than 15.85%, which is the highest porosity value of the “Vădastra I” vessels from Vădastra. The porosity reaches 23.79% with the Dudești-phase Cernica pottery at Radovanu, 21.2% with the Bolintineanu pottery at Cățelu and only 15.1% with the Bolintineanu pottery at Ciocănești.

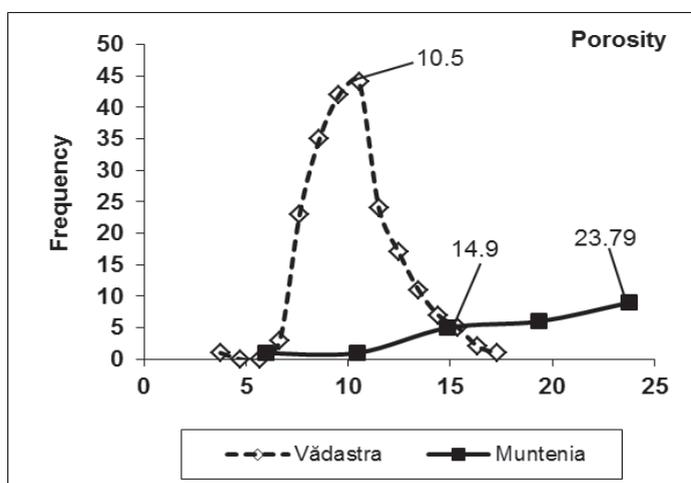


Fig. 5. The distribution of the analysed pottery fragments according to porosity.

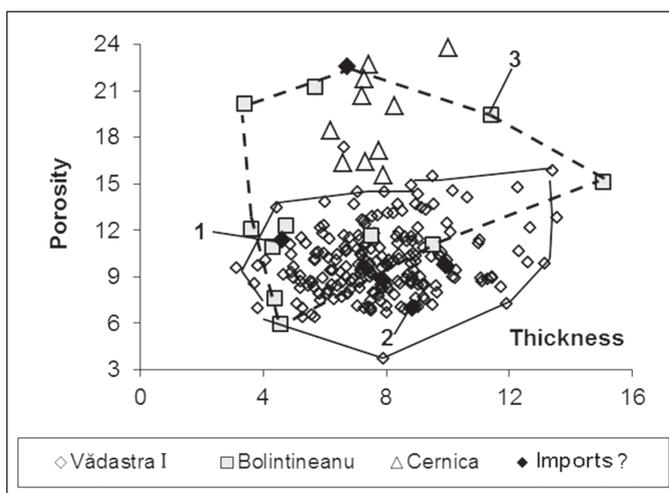


Fig. 6. The ratio between the porosity and thickness of the analysed pottery fragments.

The porosity–thickness ratios show that representative points are widely spread within the chart (Fig. 6). The three areas Vădastra, Bolintineanu and Dudești-phase Cernica intersect and exhibit the same fabric technology with chopped plants tempering.

The position of the representative points in the chart is due to the granulometric differences between the clays used for the fabric of more or less argillaceous fraction¹², which resulted in the use of a much more vegetal mass addition in Muntenia than at Vădastra. In Muntenia, the fabric clays were chosen with more or less judiciousness, according to the skill of those modelling the vessels, suggesting that beside experienced potters, at least part of the pots were made by unspecialised individuals.

The thin sections of certain potsherds show there are no sand additions as tempering material, evidenced by the larger quantities of added vegetal mass of chopped grass and, rarely, chaff in order to prevent the cracking of the pots when dried and fired. In fact, cracked potsherds were found in some of the Bolintineanu settlements, for instance at Radovanu (Fig. 6, point 3).

The fine pottery Bolintineanu fragment at Vădastra (Fig. 6, point 1) is included in both the Vădastra and Bolintineanu areas, beside points corresponding to the two pottery traditions, hence its origin to one or another Bolintineanu settlement cannot be specified with the aid of the chart. Concurrently, the other three supposed Bolintineanu potsherds (Fig. 6, point 2) are placed in the “Vădastra I” pottery area at Vădastra and would suggest they are attempts to copy the Bolintineanu decoration.

Colour of the pottery fragments

The potsherd of the fine Bolintineanu pottery found at Vădastra is yellow-greenish, unprecedented with the Vădastra pottery. The colours determined with Munsell charts were quantified by the relation: $BR = (10-C) \cdot H/V$ where BR is the “Blackness rate”, C is the “Chrome”, H is the “Hue” and V is the “Value” in these charts. The quantified

¹² The argillaceous fraction is deemed to contain particle sizes less than 0.002 mm.

values may compose a BR exterior-BR interior chart for the “Vădastra I” pottery at Vădastra, the Dudești-phase Cernica pottery at Radovanu and the Bolintineanu pottery at Cățelu, Cernica, Radovanu and Ciocănești (Fig. 7).

The comparison of the examined potsherd hues shows they were fired at different low temperatures in an atmosphere from reducing to oxidising. Should we consider conventionally the grey hue (10YR5/1 = BR 18) as the lower limit of the reducing atmosphere, then the “Vădastra I” pottery at Vădastra was fired in a reducing atmosphere of 75% in proportion, the Bolintineanu pottery - of 25% and the Dudești-phase Cernica pottery at Radovanu - of 20%. In fact, these percentages indicate that at Vădastra, a reducing firing was intended, which was carried out in proportion of 75%, while in the case of Dudești-Cernica and Bolintineanu pottery the atmosphere in the firing chamber was less controlled, as either the potters could not control the firing atmosphere or were not interested in such control.

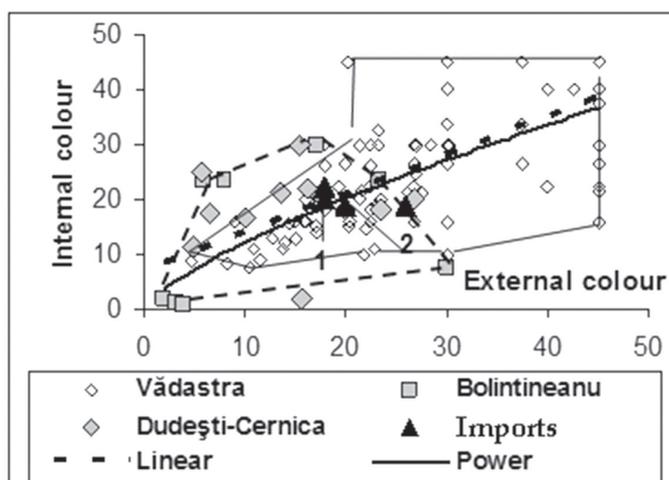


Fig. 7. The ratio between the “Blackness rate” on the internal versus external surfaces of the analysed pottery fragments.

The close correlation of the exterior colours with those interior with the “Vădastra I” pottery at Vădastra ($n = 102$, $R_{pow} = 0.723^{***}$, $R_{lin} = 0.708^{***}$, $F = 101$) confirms the possibility that the potters in the Vădastra tradition of the eponymous settlement performed a reducing firing.

The points corresponding to the supposed Bolintineanu potsherds at Vădastra lie in the intersection surface of Vădastra and Bolintineanu areas. As a result, their origin cannot be specified based only on such a chart.

Mineralogical and chemical determinations

The X-ray diffraction charts showed that the pottery mass at Vădastra (Criș, Vădastra, Sălcuța and decorated Bolintineanu) contains quartz (4.26 Å; 3.34 Å), calcite (3.03 Å), feldspar (3.21 Å; 3.18 Å), micas (10 Å; 4.97 Å) and kaolinite (7.15 Å). The height ratios of the carbonates and micas diffraction lines are smaller in the Vădastra

pottery than that in Muntenia. Therefore, the decorated Bolintineanu potsherds at Vădastra, with small ratios, suggest they are attempts to reproduce the Bolintineanu decoration by the Vădastra potters.

The ceramic mass of the fine decorated Bolintineanu potsherd contains in addition lepidocrocite (6.27 \AA), a ferrous hydrated ferrous oxide which shows that the fabric source was taken out of a hydromorphous layer inexistent at Vădastra. Therefore, the Bolintineanu decorated fragment could belong to an authentic Bolintineanu tradition pot.

In order to locate the region from where the fine pottery Bolintineanu fragment from Vădastra could be originating, the means of certain microelements in areas that comprise Bolintineanu settlements (Piatra-Olt-Caracal, Islaz-Chirnogi, București-Cernica and Vărăști-Coslogeni) and microelements from Vădastra were computed. Such data was compared with the content value of these microelements in the ceramic mass of the fine pottery Bolintineanu fragment discovered at Vădastra (Table 1).

Region	Clay	Calcite	Cu	Pb	Zn	Co	Ni	Cd	Cr
Bucharest*	30	0	14.3	11.2	59.2	9.5	20.5	0.43	18.5
Vărăști-Coslogeni	32	14.5	15.8	16	49.5	12.9	38.3	1.09	49.52
Izlaz-Chirnogi	23.6	8.2	19.6	17.9	51.4	14.2	40.8	1.21	55.5
<i>Bolintineanu fragment at Vădastra</i>	-	-	18.8	18	50.6	13.8	42	1.12	55
Vădastra	18.6	7.9	17.6	12	49.8	12.3	34	0.65	57
Piatra-Olt-Caracal	33.4	8.2	15.9	13.1	72.7	15.7	37	0.87	52.2

Table 1. Total content of microelements (*analytical data in Lăcătușu et alii 2004).

The Piatra-Olt-Caracal region has smaller averages of copper, lead, nickel, cadmium and chrome and higher averages of zinc and cobalt than the Bolintineanu potsherd.

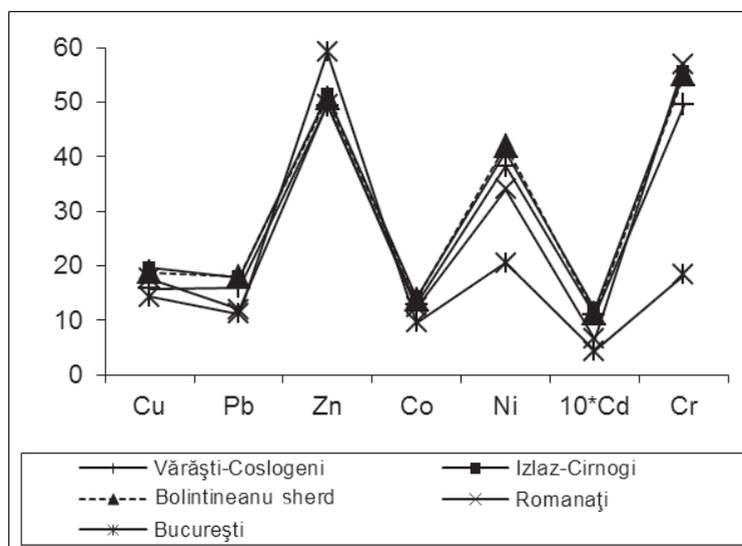


Fig. 8. The presumptive sources for the Bolintineanu pot fragment from Vădastra.

The Bucharest region has smaller concentrations of copper, lead, cobalt, nickel, cadmium and chrome and higher of zinc. Only the regions along the Danube and especially the region Islaz-Chirnogi show microelement concentrations closer to those in the ceramic mass of the Bolintineanu potsherd found at Vădastra. In a chart (Fig. 8) using these microelements averages, the resemblance between the average values in the Islaz-Chirnogi region and the values determined for the ceramic mass of the fine Bolintineanu pottery fragment discovered at Vădastra is obvious. The microelements averages at Vădastra are different from the composition of the Bolintineanu potsherd and confirm its origin in the Islaz-Chirnogi region.

Moments in the biography of a Bolintineanu pot

The goblet to which the Bolintineanu fragment discussed herein belongs was modelled in a settlement located along the Danube, in the Islaz-Chirnogi region of Muntenia. At a later date, the vessel reached the Vădastra settlement in Oltenia either by water, more precisely by the Danube, or by land.

The decoration and yellow-greenish colour noticed by the archaeologist as different compared to the channelled Vădastra pottery, must have very likely been also noticed by the inhabitants in the Neolithic settlement at Vădastra. Together, the decoration and colour evoked another world for the viewers of Vădastra and likely conferred a material dimension to the stories of the one/those that had carried the small vessel. As mentioned by Evžen Neustupný, the world of the prehistoric communities may be divided into three areas: the familiar area - which included the settlement and the area in its immediate vicinity; the area of the Other - which comprises the region inhabited by peoples belonging to other communities, yet who had a similar material culture; and a foreign area - which comprised the region with which those in the familiar area had few relations¹³. For the inhabitants of the Neolithic settlement at Vădastra, the Bolintineanu goblet came from the area of the Other. The connections with this area seem to have been common, evidenced by the existence of other (fragments of) Bolintineanu vessels in the settlement at Vădastra, like for instance, the vessel discovered in 1958, in square 14¹⁴ (Fig. 9), which, according to a comparative analysis, comes from the area of the Other too, the fabric of which it was modelled being similar to that of certain fragments from the Bolintineanu settlement at Cățelu, in Muntenia¹⁵. The goblet is the “material memory”¹⁶ of a travel and of places located beyond the familiar zone. In terms of function, given the shape and burnish of the interior surface, the goblet is part of the “family” of Boian and Vădastra containers connected to drinking, such as cups, beakers, bowls or jugs¹⁷. As noticed by Laurens Thissen in the case of the Vădastra pottery¹⁸, the channelled decoration might suggest

¹³ Neustupný 1998; Chapman 2010.

¹⁴ Mateescu 1961b, 58-59, Fig. 2.

¹⁵ Cornelia Cârpuș, pers. com., Constanța 2013.

¹⁶ Olivier 2008.

¹⁷ For Boian tradition see Comșa 1974; Neagu 1999; Thissen 2002. For Vădastra tradition see Drăgoșman 2013; Thissen 2013.

¹⁸ Thissen 2013.

a liquid content. Indeed, the horizontal and “waved” channelling on the Bolintineanu fragment might have been metaphorically associated with liquids, for instance, with water.

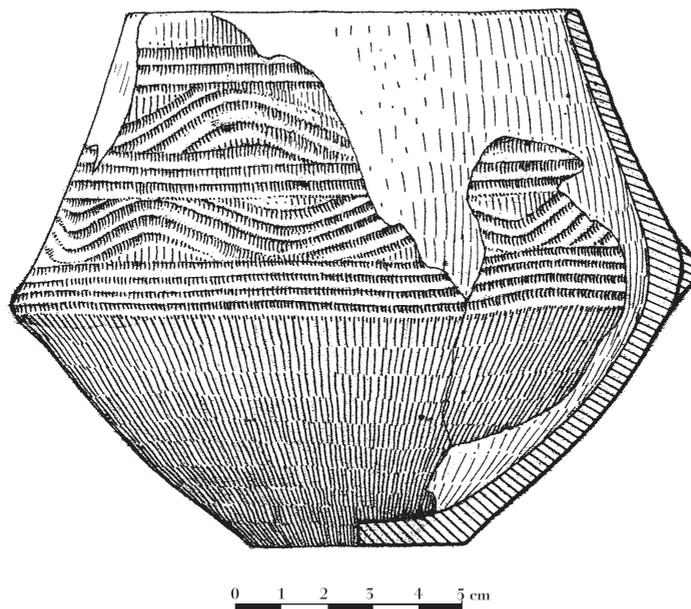


Fig. 9. Pot of “Bolintineanu type” from Vădastra (after Mateescu 1961b, 59, Fig. 2).

Similarly to the Vădastra channelled pottery, the channelled decoration on the Bolintineanu goblet is noticeable upon touch or, especially, when placed into the light, which indicates that, the channelled decoration of the goblet reveals itself to the user only by nearness¹⁹. Such proximity references the likely involvement of the channelled vessels in general into events relating the people together and where liquids were drunk (as well)²⁰. In consequence, the goblet is concurrently a familiar object as it is part of a sensitive universe and of a series of common practices to both the inhabitants of the Vădastra settlement at *Măgura Fetelor/Dealul Cișmelei* as well as those in the Bolintineanu settlement in the Islaz-Chirnogi region. Briefly, in the new settlement where it was brought, the goblet was both a “foreign” and a “familiar” object. The goblet seems to have been short lived or, if it survived longer, it was less used, as neither the rim nor the interior surface or exterior are altered, exhibiting no “scars” due to use. At a certain given moment in its biography, the vessel was broken, accidentally or intentionally, part of it finally reaching a pit, beside other local materials. Even after having been broken the container, its fragments seem to have remained charged with meaning, due to their capacity to incite recollection, to evoke the long journey. It is not excluded that, for a while, the fragments were preserved and/or circulated, as suggested by their deposition in different contexts: the pit in squares 12 and 13 excavated in 1956 contained only part of the vessel, the missing parts possibly being found

¹⁹ Dragoman 2013, 67.

²⁰ Dragoman 2013, 67.

in other areas of the settlement or, possibly, in another site²¹. In other words, the Bolintineanu vessel did not cease to exist when broken, but continued its biography in the form of the fragments, which were handled in various ways and contexts.

Conclusions

In order to specify the origin of a fine potsherd with Bolintineanu decoration and the three supposed Bolintineanu potsherds, all found at Vădastra, we determined the thickness, diameter, porosity, minerals in the ceramic mass and colour hues of certain fine black burnished “Vădastra I” pottery fragments from the eponymous settlement, Bolintineanu pottery at Ciocănești, Radovanu, Cățelu and Cernica and Dudești-phase Cernica, pottery at Radovanu.

The use of the diameters and thicknesses of the pottery fragments did not differentiate the four pottery groups, as in the Middle Neolithic of the Lower Danube (Oltenia and Muntenia) the vessels’ size was the same and the modelling similar.

The porosity of the ceramic mass did not accurately determine the origin of the four Bolintineanu type potsherds from Vădastra, as the Vădastra and Bolintineanu potteries appear with the same fabric technology, using chopped vegetal mass as tempering material. Tempering with large quantities of vegetal mass and the presence of cracked vessels indicate the absence of adequate fabric clays near the settlements or the lack of judiciousness of some potters in the Bolintineanu settlements.

The intensity ratios of the calcite and quartz diffraction X-ray lines showed that the three potsherds of 1971 from Vădastra are attempts to reproduce the Bolintineanu decoration by the potters in the eponymous settlement. The fine pottery Bolintineanu fragment is carried to the settlement, as its pottery mass contains lepidocrocite, specific to a hydromorph layer missing in Vădastra.

Certain microelement average values in areas of the Romanați Plain in Muntenia indicate concentrations in the pottery mass of the Bolintineanu fine pottery fragment discovered at Vădastra similar to those in the Islaz-Chirnovi area and consequently suggest it was brought from there.

As a general conclusion, we believe that technological analyses are paramount for understanding object biographies.

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²¹ See Chapman 2000, 58-64.

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† Gheorghe Gâță

Radu-Alexandru Dragoman
 “Vasile Pârvan” Institute of Archaeology
 of the Romanian Academy, Bucharest
 al_dragoman@yahoo.com