

CRAFTSMANSHIP AND COMMUNITY IN THE EASTERN CARPATHIAN BASIN DURING THE LATE IRON AGE (4TH – 3RD CENTURIES BC)*

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Introduction.

The crafts and craftsmanship of past societies are among the most discussed topics in archaeology mostly due to the numerous traces of manufacturing activities which were identified on different sites. These include raw materials, installations and workshops, as well as tools, semi-finished and finished goods, waste, scraps and rejects. Furthermore, the adoption of modern analytical methods from other sciences (e.g. metallographic, petrographic, chemical and biochemical analyses) allowed the recovery of important information about ancient technologies used in the manufacturing of different artefacts. Consequently, the interdisciplinary approaches contributed substantially to a better understanding of the technological aspects of ancient crafts.

On the other hand, several specialists have chosen to focus on the economic, social and political impact of crafts-related activities on different communities. During the last decades, the relationship between these activities and various social-political structures was examined from different perspectives by archaeologists and anthropologists¹.

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¹ See the summary of these approaches in Costin 2001a, p. 271-275, with further bibliography.

One approach has focused on the role played by craft specialization in the development of hierarchical societies. Some specialists² suggested, using different arguments, that craft specialization was in general associated with the appearance and development of complex societies. One of their arguments point to the role played by specialized craftsmen in the creation of the symbols of status (weapons, body ornaments, constructions etc) used by the elites to reiterate their authority.

Another approach has argued that the manufacturing activities and the ways in which they were organized are primarily connected with the social-political sphere, rather than with the economic or technological ones. The control and exploitation of resources, the organization of workforce, the distribution and consumption are activities which require significant social-political connections at the communal, regional and pan-regional level³.

Lastly, a third approach regarding the relations between manufacturing activities and the social structures has explored the social functions of the artefacts. Objects have a “social life”⁴ and develop a “cultural biography”⁵ as agents of communication within and between communities; they could signal a particular identity based on social status, affiliation, gender, age etc, being recognized as markers of social differentiation between individuals and groups⁶.

In order to understand the social impact of the manufactured objects, one has to discuss the social-political status and identity of the craftsmen within a given community. From this point of view, one important aspect concerns the social affiliation of different specialized craftsmen and of their activity. For example, T. Earle made distinction between the “attached” and the “independent” specialists⁷, a concept which was subsequently developed by other scholars⁸. The “attached” specialists produced high-value goods “for elites and the governmental institutions that they control”⁹, these being sometimes identified as “prestige” or “desirable” goods. The latter were defined as “goods perceived as having a higher social, political or/and economic relevance in a given society...”¹⁰. On the other hand, the “independent” craftsmen produced common, widely used objects “for an unspecified market often consisting largely

² Childe 1936; idem 1958, p. 162-173; Brumfiel, Earle 1987; Wailes 1996 etc.

³ Cobb 1993, p. 65-70; Spielmann 2002; Costin 2001a, p. 274, with further bibliography.

⁴ Appadurai 1986.

⁵ Kopytoff 1986; Gosden, Marshall 1999; Joy 2009 etc.

⁶ Cobb 1993, p. 72-73; Costin 2001a, p. 274-275; Clark 2007.

⁷ Earle 1981; Brumfiel, Earle 1987, p. 5-6.

⁸ Costin 1991, p. 5, fig. 1/1; idem 2001a, p. 297-300; idem 2005, p. 1069-1071; Ames 1995, p. 158; Inomata 2001; Egri 2014; Nørgaard 2014, p. 39-40.

⁹ Earle 1981, p. 230.

¹⁰ Egri 2014, p. 233.

of nonelites”¹¹. However, some studies have shown that this classification is more likely an ideal interpretative model since, for example, an “independent” craftsman could temporarily become “attached” in certain circumstances¹².

Nevertheless, this model can be used as the starting point for a discussion regarding the craftsmen’s social status and mobility within different communities, as well as the impact of these aspects on the characteristics and intensity of manufacturing activities. This category experienced not only a spatial mobility, but also a temporal one. The spatial mobility embraced different forms, one being the so-called “commercial” one which concerned the voluntary travelling in search of clients. This was the case of some craftsmen from Greece or the Levant in the first half of the 1st millennium BC, or of those originating from the Near Eastern communities, after the collapse of the Bronze Age societies¹³. A similar situation very probably characterized some of the Iron Age craftsmen in temperate Europe.

In some other cases, the craftsmen’s mobility could be classified as “reciprocative”. This implies the exchange of specialists as part of the diplomatic agreements between various rulers, mostly when the craftsmen were dependants in one way or another¹⁴. This kind of mobility was mostly present within highly hierarchical societies, dominated by an authoritarian elite whose social status and power were based on an economy of prestige, for example during the late Hallstatt and early La Tène period in western Europe or the 5th – 4th centuries BC in the northern Balkans.

The temporal mobility of the craftsmen implied the transmission of knowledge from one generation to another within the same family or group of specialists¹⁵. The process involved not only the transmission of specific techniques and “recipes” but also of the associated customs and beliefs, being based on a complex learning structure in which apprentices were integrated since childhood¹⁶. In the case of complex crafts, like metallurgy or pottery, the magical element played a quite significant role in the preservation and transmission of specific knowledge. The extraction and transformation of matter using the fire, its transfer from one state into another, required a form of interaction between the world of the living and the supernatural one, so these were accompanied by numerous rituals and magical precautions. Consequently,

¹¹ Earle 1981, p. 230.

¹² Costin 2001b, p. 334; Egri 2014, p. 234-235.

¹³ Zaccagnini 1983, p. 257-264.

¹⁴ Zaccagnini 1983, p. 249-256; see also Nørgaard 2014; Egri 2014, p. 236-237.

¹⁵ Rustoiu 1996, p. 61-64; Rustoiu, Berecki 2014.

¹⁶ Karl 2005; Rustoiu, Berecki 2014, p. 254-256.

such activities were only performed by initiated individuals¹⁷. This fact could largely explain the long-time preservation of certain technological “secrets” among small groups of artisans.

The eastern Carpathian Basin in the 4th – 3rd centuries BC.

The eastern part of the Carpathian Basin experienced a process of Celtic colonization in successive stages during the second half of the 4th century and at the beginning of the 3rd century BC. Some small colonist groups originating from the Central European regions gradually advanced to the east and their movements are documented by the cemeteries displaying specific elements of the funerary rite and ritual. These cemeteries were established at the end of the LT B1 or in the LT B2, and remained in function during the LT C1. The arrival of the Celtic groups eastward the middle Danube basin contributed to the social and cultural reconfiguration of this region. The new communities resulting from the cohabitation of the indigenous population with the Celtic newcomers created different means of expressing individual and collective identities¹⁸.

The settlements of this period had a rural character and the number of dwellings in each of them was small. There are a few cases, for example at Ciumești¹⁹ and Cicir²⁰ in western Romania, and probably at Polgár²¹ in eastern Hungary, where the dwellings were grouped, most probably reflecting an internal organization of the habitat based on family or clan affiliation (**Fig. 1**). A similar kinship-based organization can be sometimes observed in cemeteries consisting of clearly separated groups of burials.

From this point of view the cemetery from Fântânele - Dâmbu Popii in eastern Transylvania provides a good example²². Chronologically, the cemetery has four evolutive phases between the end of the LT B1/beginning of the LT B2 and the LT C1. The earliest burials are concentrated in three groups located on the hilltop from the east to the west (**Fig. 2/1**). These groups probably belong to some founding families or clans. All three burial groups developed concomitantly during the next two phases. However, the burials belonging to the western group tended to expand spatially and numerically during the third phase and mostly in the last phase (LT B2b and LT C1) to the detriment of the other two groups. This situation points to a possible demographic increase of the clan using the western part of the cemetery, and perhaps also to a growing social

¹⁷ Eliade 1996; see also Budd, Taylor 1995; Rustoiu 2002; Rustoiu, Berecki 2014, p. 255-256; Gansum 2004; Haaland 2006; idem 2007/2008; contra Kuijpers 2012.

¹⁸ Rustoiu 2008; idem 2014a; idem 2015; Rustoiu, Berecki 2016.

¹⁹ Zirra 1980.

²⁰ Rustoiu 2013.

²¹ Szabó *et alii* 2008.

²² Rustoiu 2015, p. 22-23, fig. 19.

authority of this group within the community as part of the local social competition.

This hypothesis seems to be also supported by the manner in which the burials containing weaponry were located in the cemetery (**Fig. 2/2**). During the last phase these burials were concentrated in the area occupied by the western group. Another relevant aspect is the structure of their funerary inventory, which contained complete panoplies of weapons consisting of swords, spears and shields. These panoplies illustrate a particular manner of expressing the warlike identity that is different from the one used by previous generations, which were usually buried only with spears²³.

It can be therefore said that in spite of the rural and apparently “egalitarian” character of the communities from the eastern Carpathian Basin the organization of certain cemeteries and settlements, as well as a number of assemblages associated with these sites, indicate the existence of a social hierarchy with a clearly defined elite and forms of social competition that involved groups belonging to the same community or to different communities. As a consequence, archaeological evidence concerning the activity of the craftsmen and workshop organization in this region has to be interpreted on the basis of this framework.

Craftsmanship and identity.

A series of funerary contexts hints to the social role and status of the craftsmen within the communities in question through the manner in which their identity is expressed. In some cemeteries, for example at Vác and Ludas in eastern Hungary or at Pişcolt, Fântânele - Dâmbu Popii, Fântânele - La Gâta and Galații Bistriței in Transylvania, were found graves containing various tools and other implements used in carpentry, leather processing, blacksmithing or surgery (see **List no. 1**). Their presence reflects the mourners’ intention of deliberately expressing a particular identity and also allows the identification of certain individuals who specialised in these activities²⁴.

Regarding the gender of the artisans, there are too few anthropological analyses of the cremated or inhumed human remains recovered from the cemeteries of the eastern Carpathian Basin. When such analyses were performed, for example at Ludas, they indicated that the burials containing crafts-related tools belonged to adult individuals who were more likely males²⁵.

²³ Rustoiu, Berecki 2015, p. 132, fig. 4.

²⁴ M. Ježek (2015) considers that the graves whose inventories contain metallurgical tools cannot be ascribed to “smiths”, “metallurgists” or “jewellers”, albeit recognizing the important symbolic role of these tools in funerary rituals. My (Aurel Rustoiu) opinion is that his arguments are rather unsubstantiated and sometimes biased. The topic will be discussed in detail in a separate study.

²⁵ Tankó 2012.

Some of these graves also contain panoplies of weapons (**Fig. 3/1-2**). Very probably they were meant to symbolically signal that the owners belonged to the “freemen” group, having the right to participate in communal meetings and to bear weapons without actually being active warriors²⁶. Up to a point, these situations are similar to those of the female burials containing weapons, belonging to the so-called “honorary males”²⁷.

Other graves ascribed to craftsmen contain no weapons, which may suggest that the social status of the deceased was different (**Fig. 3/3-4; 4/1**). In some cases the craftsmen could have come from other communities or regions. One example is provided by grave no. 34 from Fântânele - Dâmbu Popii which contains, among other things, an iron hammer used by jewellers and a handmade ceramic lamp (**Fig. 3/4**). The latter object imitates a Greek wheel-made open lamp²⁸. Similar artefacts were found in the Pontic area, both in the Greek cities and in the nearby indigenous settlements²⁹. Aside from the piece found at Fântânele, no other lamp of this kind was discovered in the Carpathian Basin during this period. The use of this lighting device required a certain degree of familiarisation with an unusual source of artificial light, which could not be acquired within the community from Fântânele, but in an area in which such objects were commonly used. The presence of this lamp in grave alongside the iron hammer, a tool which was probably relevant for the role of the deceased in the local community, suggests that this rather “exotic” object was also perceived as an integral part of the deceased’s identity. It might be also presumed that the craftsman who met his end in the community from Fântânele either came from outside the Carpathians range, more likely from the eastern area, or was a local who worked there for a while.

Mobile craftsmen.

In many cases the activity of the craftsmen was closely related to the demand created by the elites seeking the so-called “prestige” or “desirable” goods, and from this point of view the mobility of the latter also contributed significantly to that of the “attached” artisans. One interesting example comes from north-eastern France and concerns some bronze fittings decorated in the Plastic Style, dated to the first half of the 3rd century BC, which were part of a wooden shield found in the cemetery at Plessis-Gassot. Recent metallographic analyses indicate that the technology used in their manufacturing is similar to that of other examples from the Carpathian Basin. The authors concluded that the technological transfer from the east to the west was more likely facilitated by

²⁶ Henning 1991; Rustoiu, Berecki 2015, p. 132-134.

²⁷ Arnold 1995; Simniškytė 2007.

²⁸ Rustoiu 2008, p. 121-123; Rustoiu, Egri 2010; Rustoiu, Berecki 2014, p. 250, fig. 1, pl. 1.

²⁹ E.g. Hannestad 2007, p. 142, fig. 4; Højte 2010, p. 436, no. O-105, pl. 326.

a mobile craftsman who worked for the warlike elite of the community in question, which was also quite mobile during this period³⁰.

Another example of the craftsmen's mobility and of the accompanying technological transfers is provided by the well-known hoard containing gold objects from Szárazd–Regöly in Hungary³¹. The hoard contains both objects having morphological and technological antecedents in the northern Balkans as early as the 5th – 3rd centuries BC (tubular elements with filigree decoration or some types of beads), and artefacts manufactured according to the norms and taste of the Continental Celts, like the wheel-shaped elements or the beads decorated with human heads (**Fig. 4/2**). Although the artisans coming from the Greek, Thracian or Illyrian environment used their own technologies to produce jewellery of Mediterranean or northern Balkans inspiration which was sought by the Celtic elites, they modified them according to the visual codes and symbolic preferences of the customers. Such gold or silver jewellery made in the filigree or granulation technique played an important role in the spreading of this decorative style in the Carpathian Basin³². However, artisans from the Celtic environment combined this decorative style with their own bronze casting technique, inventing the pseudo-filigree or pseudo-granulation, so only the visual element was transferred, but not the related technology³³.

Another aspect which points to the connections between the elites and the artisans working for them concerns the length of their “collaboration”. One interesting example is provided by the sword discovered in grave no. 40 from the cemetery at Pişcolt in north-western Romania, whose scabbard was decorated in three successive stages (**Fig. 5/1**). The first ornament was specific to the so-called Sword Style. In the second stage, a pair of dragons was incised on the upper part of the scabbard. Lastly, a longitudinal openwork ornament was applied. These successive decorations demonstrate a longer use life of the sword, whereas the iconographic modifications were probably determined by the necessity to repeatedly restore the magic efficacy of the images displayed on the scabbard³⁴. Still, the successive ornamentation of the scabbard from Pişcolt can be also interpreted in a different way. The practice may suggest the weapon's transmission from one individual to another (either by successive generations or within the same generation), each seeking to express his connection with a group of warriors who chose to assert themselves through a particular symbolic code.

³⁰ Ginoux *et alii* 2014.

³¹ Hadaczek 1907; Szabó 1975, p. 152-155; idem 1991, p. 127; idem 2006, p. 114-115; Megaw, Megaw 2001, p. 166-167.

³² Szabó 1975; for the influence of Thracian jewellery on the Celtic one see Tonkova 2006.

³³ For the influence of Celtic technological knowledge on the design of certain artefacts see Jope 1996, p. 399-401.

³⁴ Rapin *et alii* 1992, p. 40-52.

At the same time, the sword might have belonged to a single person who successively “migrated” from one group to another or from one hierarchic and functional level to another, each having its own symbolic language, expressed through the scabbard’s ornamentation³⁵. The sword could have had one owner or several, but it is important to underline that the ornaments were made by an artisan (or several artisans?) who was familiarized with the required iconographic repertoire. The warlike elites more likely had such artisans at their disposal for longer periods of time, if not permanently, so the weapons and the military equipment could be mended or modified whenever was deemed necessary.

However, this was not a widespread situation. For example, the well-known iron helmet found in the cemetery at Ciumești in north-western Romania, having a bronze falcon affixed on top (**Fig. 5/2**), was quite poorly repaired³⁶. One wing of the bronze bird was damaged, being replaced by a new one which was made of low quality bronze alloy, while manufacturing was also poor, indicating that the repairing was made by another, less skilled artisan. Perhaps the specialist who originally made the helmet was out of reach for the warrior from Ciumești when the bird was damaged. At the same time, his military equipment also contained a pair of Greek bronze greaves³⁷ (**Fig. 5/3**). These were not commonly “imported” goods in the Carpathian Basin. Their manufacturing required precise measurements of the body dimensions and characteristics of the owner, and this could have only been done by specialised craftsmen. The two gilded greaves from the so-called “grave of Philip II” from Vergina, which have different dimensions, being made for a crippled man, are a significant example³⁸. Thus it is almost sure that the warrior from Ciumești ordered and obtained the greaves from a Greek workshop in the Mediterranean area. It has been recently suggested that he was a mercenary on the theatres of war from the eastern Mediterranean in a period in which the recruitment of Celtic troops by various rulers of the Hellenistic times became a common practice³⁹. He very probably ordered the greaves – an unusual element of military equipment in his homeland – while fighting alongside Hellenistic officers in the Mediterranean region, where these were a common symbol of the high military rank and status⁴⁰.

³⁵ Rustoiu, Berecki 2015, p. 137, fig. 8-9.

³⁶ Rusu 1969.

³⁷ Rusu 1969; Rustoiu 2012.

³⁸ Andronicos 1984, p. 186-189, fig. 150.

³⁹ Rustoiu 2006; idem 2008.

⁴⁰ Idem 2012, p. 159-171.

Crafts and settlement organization.

Returning to the settlements, it can be noted that they sometimes had workshops which responded to the regular needs of the local community. Many of these local workshops were specialised in pottery manufacturing, although the number of examples is quite small due to the limited archaeological investigations carried out in and around settlements. These were mostly identified during recent large-scale rescue excavations along the new motorways, for example in north-eastern Hungary, north-western Romania and Transylvania (see **List no. 2**), and it has been noted that such workshops functioned either within or in the close vicinity of numerous rural settlements. A similar pattern was also identified during the same period in Lower Austria and western Hungary⁴¹. The pottery workshops were primarily identified through the presence of kilns (**Fig. 6**). No particular rule was observed regarding their location, some being established inside the settlement and others at the periphery. Archaeological investigations also unearthed pits for clay preparation and sheds in which the wares were made and dried before firing; these were not always located in the close vicinity of the kilns⁴². A comparison between the total number of workshops and that of the settlements which were comprehensively investigated indicates that a significant percentage of the rural communities from the region in question had regular access to specialized potters. More than that, sets of purposefully made ceramic vessels having the same origin were identified in some burials, for example at Fântânele - Dâmbu Popii⁴³. These could have been more easily assembled when the community had permanent access to a specialized potter.

Along the same lines, several tools and installations used in metallurgical activities and even waste coming from these processes were found in some rural sites from this region. Among them can be mentioned the tuyeres discovered in the settlement at Polgár, in north-eastern Hungary⁴⁴, and several fragments of iron slag recovered from different archaeological contexts (pits and large structures which probably belonged to some workshops) from the settlement at Stolna, in Transylvania⁴⁵. Physical and chemical analyses indicate that some of these slag fragments have a high concentration of iron. At the same time, the presence of more than one per cent copper indicates that the ore smelted to obtain blooms comes from the nearby region, since this association of metals and other elements is specific to Transylvania. Furthermore, there are rich

⁴¹ Ramsel 2014, p. 73, fig. 3; Trebsche 2014, p. 356-360.

⁴² Almásy, Pop 2014; see also Trebsche 2014, p. 357-358, fig. 14.

⁴³ Rustoiu 2014b.

⁴⁴ Szabó *et alii* 2008, p. 196, fig. 11.

⁴⁵ Daróczy, Ursuțiu 2015, p. 89-90; the authors wrongly dated some of these contexts containing iron slag to the Late Bronze Age, thus at the end of the 2nd millennium BC!

sources of iron ore in this region, which were exploited until recently. Lastly, fragments of iron slag and also glass slag were recently identified in another rural settlement which was established in the second half of the 3rd century BC at Szeged - Kiskundorozsma in south-eastern Hungary⁴⁶. These traces indicate, as in the case of pottery workshops, the presence of specialised craftsmen who produced or repaired regular metal objects needed by the community.

However, one significant innovation of the 3rd century BC in the eastern Carpathian Basin is the appearance of larger manufacturing centres. The most relevant example is provided by the site at Sajópetri–Hosszú-dűlő in north-eastern Hungary⁴⁷. This is a large rural settlement in which various manufacturing activities were concentrated. The entire area was split into a series of sectors where metallurgical and pottery workshops were established. Sometimes the space between the workshops was delimited by fences, as a series of narrow trenches identified in some places seem to suggest (**Fig. 7**).

The pottery workshops consist of kilns and sheds in which the wares were made⁴⁸. The total number of workshops is higher than the one identified in smaller rural settlements, which may suggest that the ceramic production was not supplying exclusively the local community, but also those from the nearby regions.

The inventories of the structures identified as metallurgical workshops contain raw materials, currency bars, rejects, semi-finished objects etc⁴⁹. These traces illustrate, on one hand, the amplitude of the metallurgical activities on site, and on the other hand, points to the consumers of the metal products. Semi-finished or rejected weapons and elements of military equipment (swords, scabbard fittings, sword chains, shield fittings etc) demonstrate that some products were made for the warlike elite. At the same time, agricultural and carpentry tools and domestic utensils (some semi-finished or repaired) were made for the entire community from Sajópetri and also for those living in the nearby region, where field surveys and test excavations identified a high density of the habitation⁵⁰.

A similar situation was identified in the region around Mukačevo (Transcarpathian Ukraine), on the Galliš and Lovačka hills⁵¹, a contact area between the “La Tène” cultural space and the local “Thracian” one. Previous investigations revealed the traces of an intense metallurgical activity (workshops, tools, remains of iron and other metals processing), the finished

⁴⁶ Pilling, Ujvári 2012, p. 218.

⁴⁷ Szabó, Czajlik 2007.

⁴⁸ Timár 2007; Tankó, Czajlik 2007.

⁴⁹ Guillaumet 2007; Czajlik, Molnár 2007.

⁵⁰ Czajlik, Tankó 2007.

⁵¹ Kopal’ 1995-1996; idem 2015.

products being distributed on a wider area from the basin of the upper Tisa River. It is important to note that the iron production of the workshops from Mukačevo consists of weapons and elements of military equipment, and also agricultural tools and domestic implements, so the craftsmen supplied consumers belonging to a wider social range.

Chronologically, these two production centres were contemporaneous. Both functioned during the 3rd century BC (La Tène B2-C1) and illustrate the concentration of manufacturing activities in larger centres which supplied the rural settlements from a wider surrounding area. Their development was very probably conditioned by their access to various resources, but also to a strong network of rural settlements which needed their output. This process of concentration of the manufacturing activities in a single specialized centre suggests the structural transformations which will happen a few generations later, when the “industrial production” of the large fortified centres (*oppida*) appeared. Although the evolution of the communities from the eastern Carpathian Basin witnessed a different historical destiny, which did not lead to the development of oppida, like in Transdanubia or Lower Austria, the production centres from Sajópetri - Hosszú-dűlő and Mukačevo - Galliš-Lovačka allow a better understanding of the processes that led to the genesis of this type of social-political and economic structure.

Conclusions.

Unlike the aristocratic societies of the end of the Early Iron Age in Western and Central Europe, the social structure of the 4th – 3rd centuries BC communities included an elite group which was numerically larger, with around 20–25 per cent of the burials from different cemeteries containing specific funerary inventories: weapons in male burials and complex sets of garment accessories and jewellery in the female ones. Furthermore, the differences between these individuals and other members of the communities seem to be less marked⁵². However, the analysis of some cemeteries from the eastern Carpathian Basin, like the one from Fântânele - Dâmbu Popii, indicates that the local rural communities were significantly hierarchical, experiencing various forms of economic and social competition among different groups and individuals. This competition influenced the organization of manufacturing activities, the distribution and consumption, and the relations established between artisans and consumers.

Archaeological evidence points to the existence of several categories of craftsmen, who developed a wide range of relationships with different social groups, according to the context in which they worked. However, these

⁵² Wells 1996, p. 90-91.

differentiations were fluid and conjunctural, being strongly influenced by the social-political and economic environment.

One category included the so-called “attached” artisans, locals or foreigners, who adapted their production to the practical and symbolic norms of their elite clients. They made the panoplies of weapons and the body ornaments that visually defined the affiliation of the owner to a particular social group. It can be presumed that these artisans probably had a higher social status. One argument is the association of specific tools and instruments with weaponry in some graves, which may suggest that the deceased belonged to the dominant social group.

At the same time, the finds coming from settlements indicate that these rural communities were regularly supplied with regular goods by specialized “independent” craftsmen; some were locals, while others were foreigners. Although it is often difficult to say whether they worked full-time or part-time, as P. Wells seem to suggest⁵³, some were certainly highly specialized. Metal processing, or glass and pottery making, required artisans who were familiarized with a series of complex technological processes. These were not easily acquired, needing a lengthy training under supervision in a specific environment, which often started during childhood.

One significant innovation of the 3rd century BC in the eastern Carpathian Basin is the appearance of larger manufacturing centres. This process of concentration of the manufacturing activities in a single specialized centre suggests the structural transformations which will happen a few generations later, when the “industrial production” of the large fortified centres (*oppida*) appeared though not in the eastern Carpathian Basin. The most relevant example is provided by the site at Sajópetri - Hosszú-dűlő in north-eastern Hungary. It has to be noted that these centres only had a regional economic importance, supplying a network of rural settlements from the surrounding region. The archaeological inventories of the aforementioned centre lack the Mediterranean “imports” which could attest the existence of long-distance contacts that characterized the *oppida* of the subsequent period.

⁵³ Wells 1996, p. 93.

Annexes

1. List of the LT B2-C1 graves containing crafts-related tools and utensils from the eastern Carpathian Basin (Fig. 8).

EASTERN HUNGARY

1. Ludas – Varjú-dűlő (Heves megye). Grave no. 665: leather processing tools (Szabó, Tankó 2012, p. 23-24; Marion, Guillaumet 2012, p. 194-196). Adult: 20-30 years old (Tankó 2012, p. 202).
2. Ludas – Varjú-dűlő (Heves megye). Grave no. 904 (with weapons): leather processing tools (Szabó, Tankó 2012, p. 46-47; Marion, Guillaumet 2012, p. 194-196; Szabó 2014, p. 90 identified them as surgical instruments). Adult: male, c. 20 years old (Tankó 2012, p. 205).
3. Ludas – Varjú-dűlő (Heves megye). Grave no. 1057 (with weapons): leather processing tools (Szabó, Tankó 2012, p. 71-73; Marion, Guillaumet 2012, p. 194-196). Adult: 20-24 years old (Tankó 2012, p. 208).
4. Vác – Gravel pit (Pest megye). Grave no. 55: chisel or adze (Hellebrandt 1999, p. 83-84, pl. 44: 2).

ROMANIA (TRANSYLVANIA)

5. Fântânele – Dâmbu Popii (jud. Bistrița-Năsăud). Grave no. 34: jeweller's hammer (Rustoiu 2008, p. 121-123, fig. 59).
6. Fântânele – La Gâța or Dealu Iușului (jud. Bistrița-Năsăud). Grave no. 40: leather processing tool (awl) (Beldiman *et alii* 2014; Ferencz, Vaida 2014, p. 281, pl. 2: 11).
7. Galații Bistriței (jud. Bistrița-Năsăud). Grave: surgical instrument (Dănilă 1955).
8. Pișcolt (jud. Satu Mare). Grave no. 20 (with three arrow heads): leather processing tools (awls, cutters, nail) (Németi 1992, p. 62-63).

2. List of the LT B2-C1 pottery workshops from the eastern Carpathian Basin (after Almássy, Pop 2014 and Németi 2014, with further bibliography and additions) (Fig. 8)

EASTERN HUNGARY

1. Hatvan – Boldog (Heves megye)
2. Kálmánháza (Szabolcs-Szatmár-Bereg megye)
3. Mezőkeresztes (Borsod-Abaúj-Zemplén megye)
4. Nyíregyháza – Oros (Szabolcs-Szatmár-Bereg megye)
5. Ózd (Borsod-Abaúj-Zemplén megye)
6. Sajópetri (Borsod-Abaúj-Zemplén megye)
7. Szeged – Kiskundorozsma-Sandpit 4 (Csongrád megye) (Pilling, Ujvári 2012, p. 218).

ROMANIA (TRANSYLVANIA)

8. Aghireș – Sub pădure (jud. Sălaj)
9. Andrid (jud. Satu Mare)

10. Biharea (jud. Bihor)
11. Carei – Bypass road (jud. Satu Mare)
12. Carei – Ferma avicolă (jud. Satu Mare)
13. Căuceu (jud. Bihor)
14. Orosia (jud. Mureș) (Urák 2018)

3. List of the settlements with traces of iron processing from the eastern Carpathian Basin, dated to the LT B2-C1 (Fig. 8)

EASTERN HUNGARY

1. Polgár (Hajdú-Bihar megye) (Szabó *et alii* 2008).
2. Sajópetri – Hosszú-dűlő (Borsod-Abaúj-Zemplén megye) (Szabó, Czajlik 2007).
3. Szeged – Kiskundorozsma (Csongrád megye) (Pilling, Ujvári 2012).

ROMANIA (TRANSYLVANIA)

4. Stolna (jud. Cluj) (Daróczi, Ursuțiu 2015, p. 89-90).

TRANSCARPATHIAN UKRAINE

5. Mukačevo – Galliš-Lovačka (Kobal' 1995-1996).

Translated in English by Mariana E. Egri

MEȘTEȘUGURI ȘI COMUNITATE ÎN ESTUL BAZINULUI CARPATIC ÎN CEA DE A DOUA VÂRSTĂ A FIERULUI (SEC. 4-3 A. CHR.)

REZUMAT

Scopul acestui articol este de a identifica statutul social și economic al diferitelor categorii de artizani în cadrul comunităților rurale din estul Bazinului Carpatic pe parcursul sec. IV-III a.Chr., precum și relațiile stabilite între meșteri și categoriile de consumatori. Comunitățile rurale din zona în discuție au cunoscut un anumit grad de ierarhizare socială și o competiție economică și socială. Aceasta din urmă a implicat comunități întregi, în care fiecare familie sau clan a avut tendința de a-și exprima propria putere economică, socială și politică utilizând un limbaj simbolic recunoscut de către toate părțile implicate, care presupuneau etalarea unor *desirable goods* și a altor elemente de prestigiu.

Ca urmare, elitele au simțit nevoia de a controla producția de astfel de bunuri de prestigiu și de a avea acces la artizani specializați, capabili să le ofere. Unii dintre acești meșteri erau locali, în timp ce alții erau străini, din afara comunităților. Mobilitatea elitelor a determinat de asemenea mobilitatea unor artizani de prestigiu. Descoperirile din așezări ilustrează existența unei alte categorii de meșteri specializați care aprovizionau regulat comunitățile rurale cu obiecte de larg consum. În sfârșit, secolul al III-lea a.Chr. a fost martorul apariției unui fenomen nou: concentrarea activităților

meșteșugărești în mari centre specializate, așa cum o demonstrează așezarea de la Sajópetri din nord-estul Ungariei. Aceste fenomene anunță transformările de esență în organizarea economică și socială, care se vor produce în secolul următor și care vor lua forma comunităților oppidane.

LIST OF FIGURES:

Fig. 1. 1. Location of the dwellings on the plan of the settlement at Cicir (after Rustoiu 2013). 2. Location of the dwellings (black squares) in the settlement at Polgár (after Szabó *et alii* 2008).

Fig. 2. 1. Chronological evolution of the Fântânele - Dâmbu Popii cemetery. Red: 1st horizon (LT B1/B2). Green: 2nd horizon (LT B2a). Blue: 3rd horizon (LT B2b). Brown: 4th horizon (LT C1). 2. Chronological distribution of the graves with weapons in the same cemetery (after Rustoiu 2015).

Fig. 3. Graves with crafts tools. 1. Ludas-Varjú-dűlő, grave no. 904. 2. Ludas-Varjú-dűlő, grave no. 1057. 3. Ludas-Varjú-dűlő, grave no. 665. 4. Fântânele - Dâmbu Popii, grave no. 34 (1–3 after Szabó & Tankó 2012; 4 after Rustoiu 2008).

Fig. 4. 1. Fântânele - La Gâța, grave no. 40: leather processing instrument (awl) placed on the deceased's chest (photo D. L. Vaida). 2. The gold hoard from Szárazd-Regöly (after Szabó 1999).

Fig. 5. 1. Sword from grave no. 40 at Pișcolt and the three stages (A-C) of ornamentation (photo Museum of Satu Mare; drawings after Rapin, Szabó & Vitali 1992). 2. The iron helmet from Ciumești having a bronze falcon on top (photo I. V. Ferencz). 3. The bronze greaves from Ciumești (photo Museum of Baia Mare).

Fig. 6. Pottery kilns from: 1. Căuceu. 2. Carei - Bypass road. 3. Aghireș (after Némethi 2014).

Fig. 7. Topographic plan of the settlement at Sajópetri-Hosszú-dűlő (adapted after Szabó & Czajlik 2007): 1. Dwellings. 2. Ceramic workshops. 3. Pottery kilns. 4. Metallurgical workshops, iron slag and iron ore. 5. Foundation trenches of the fences.

Fig. 8. Distribution map of the sites mentioned in text. Black stars: LT B2-C1 graves containing crafts-related tools and instruments (see list no. 1). Red dots: LT B2-C1 pottery workshops (see list no. 2). Green squares: settlements with workshops and traces of iron processing (see list no. 3).

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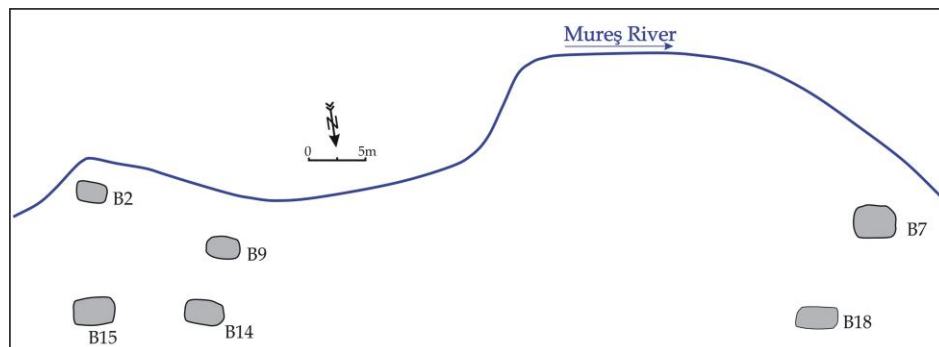
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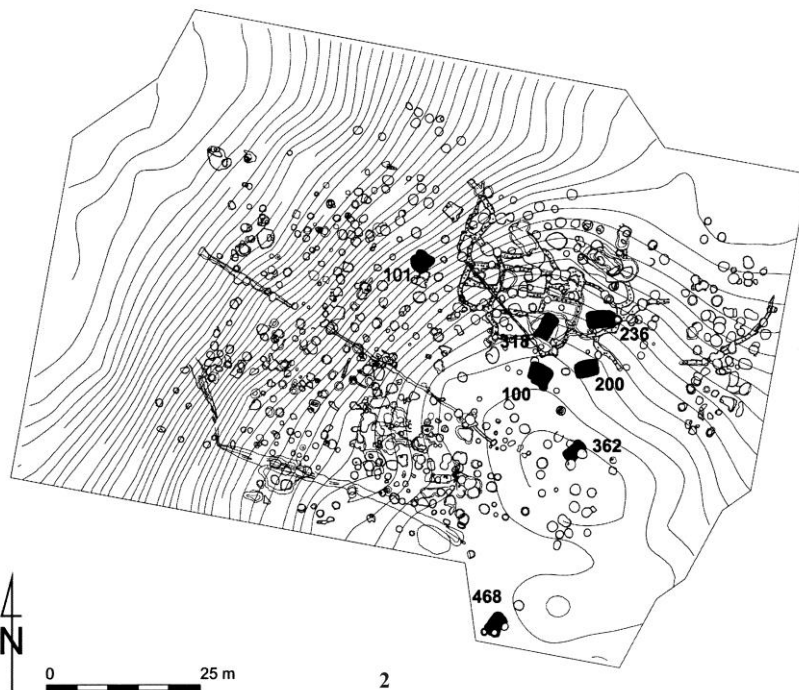
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1



2

Fig. 1. 1. Location of the dwellings on the plan of the settlement at Cicir (after Rustoiu 2013). 2. Location of the dwellings (black squares) in the settlement at Polgár (after Szabó *et alii* 2008).

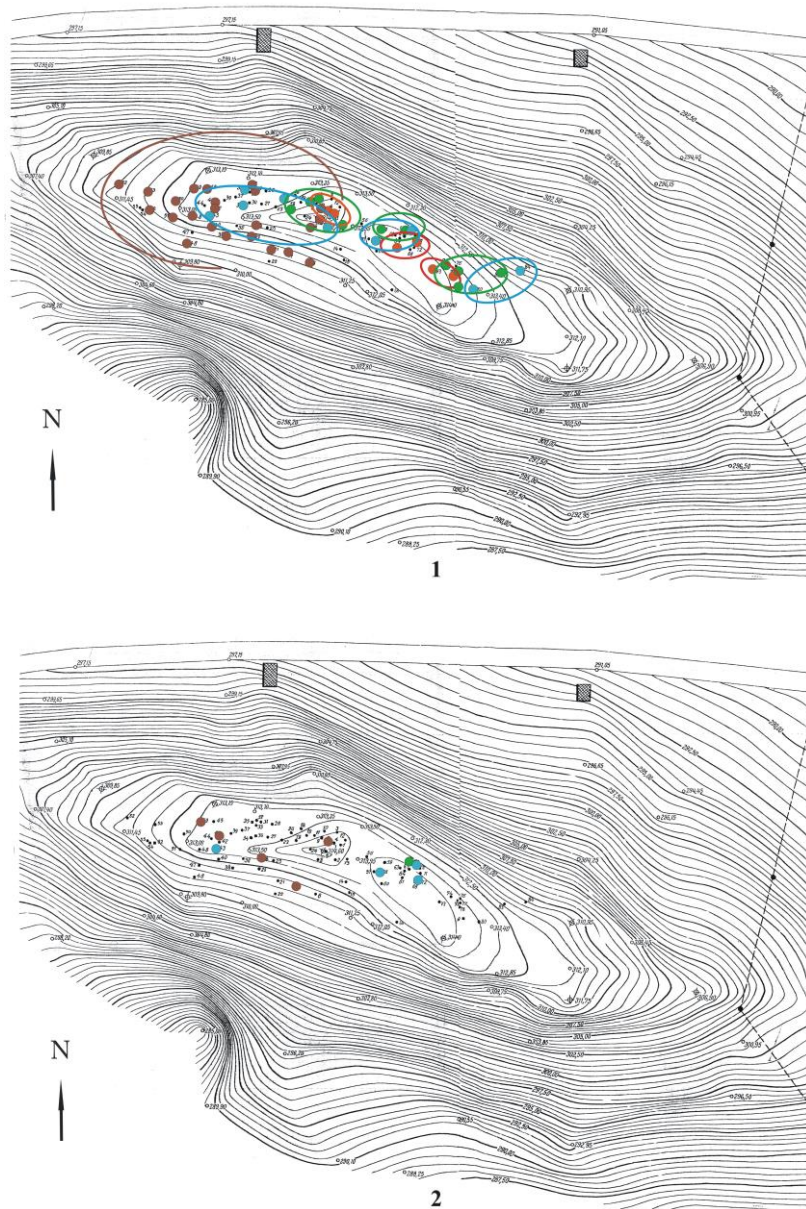


Fig. 2. 1. Chronological evolution of the Fântânele - Dâmbu Popii cemetery. Red: 1st horizon (LT B1/B2). Green: 2nd horizon (LT B2a). Blue: 3rd horizon (LT B2b). Brown: 4th horizon (LT C1). 2. Chronological distribution of the graves with weapons in the same cemetery (after Rustoiu 2015).

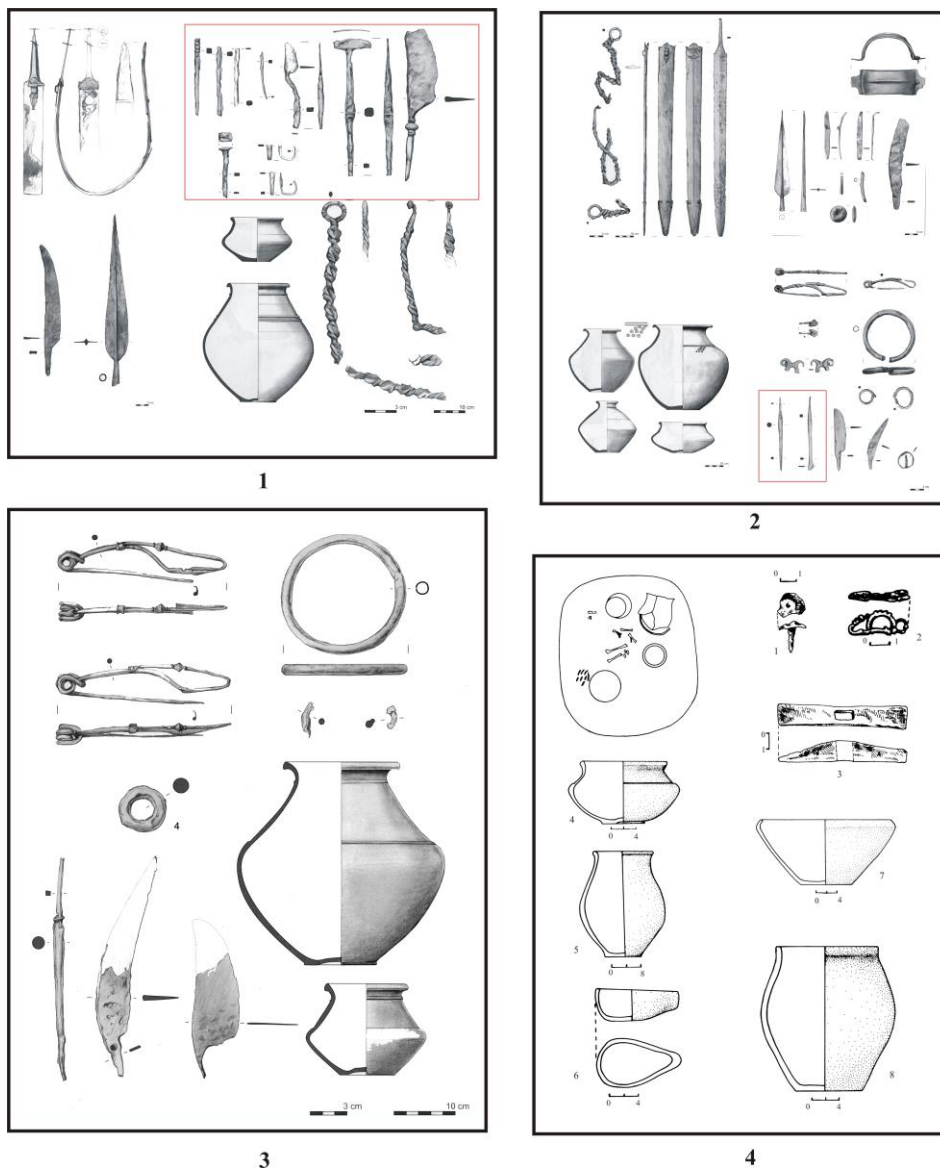


Fig. 3. Graves with crafts tools. 1. Ludas-Varjú-dűlő, grave no. 904. 2. Ludas-Varjú-dűlő, grave no. 1057. 3. Ludas-Varjú-dűlő, grave no. 665. 4. Fântânele - Dâmbu Popii, grave no. 34 (1–3 after Szabó & Tankó 2012; 4 after Rustoiu 2008).



Fig. 4. 1. Fântânele - La Gâta, grave no. 40: leather processing instrument (awl) placed on the deceased's chest (photo D. L. Vaida). 2. The gold hoard from Szárazd-Regöly (after Szabó 1999).



Fig. 5. 1. Sword from grave no. 40 at Pişcolt and the three stages (A-C) of ornamentation (photo Museum of Satu Mare; drawings after Rapin, Szabó & Vitali 1992). 2. The iron helmet from Ciumeşti having a bronze falcon on top (photo I. V. Ferencz). 3. The bronze greaves from Ciumeşti (photo Museum of Baia Mare).



Fig. 6. Pottery kilns from: 1. Căuceu. 2. Carei - Bypass road. 3. Aghireș (after Némethi 2014).

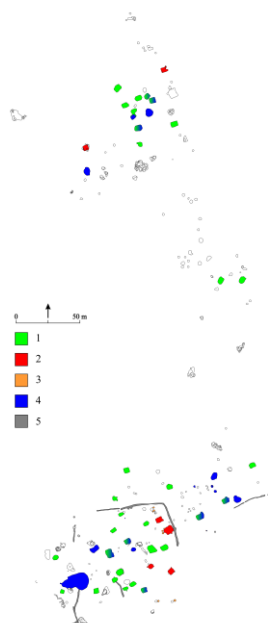


Fig. 7. Topographic plan of the settlement at Sajópetri-Hosszú-dűlő (adapted after Szabó & Czajlik 2007): 1. Dwellings. 2. Ceramic workshops. 3. Pottery kilns. 4. Metallurgical workshops, iron slag and iron ore. 5. Foundation trenches of the fences.

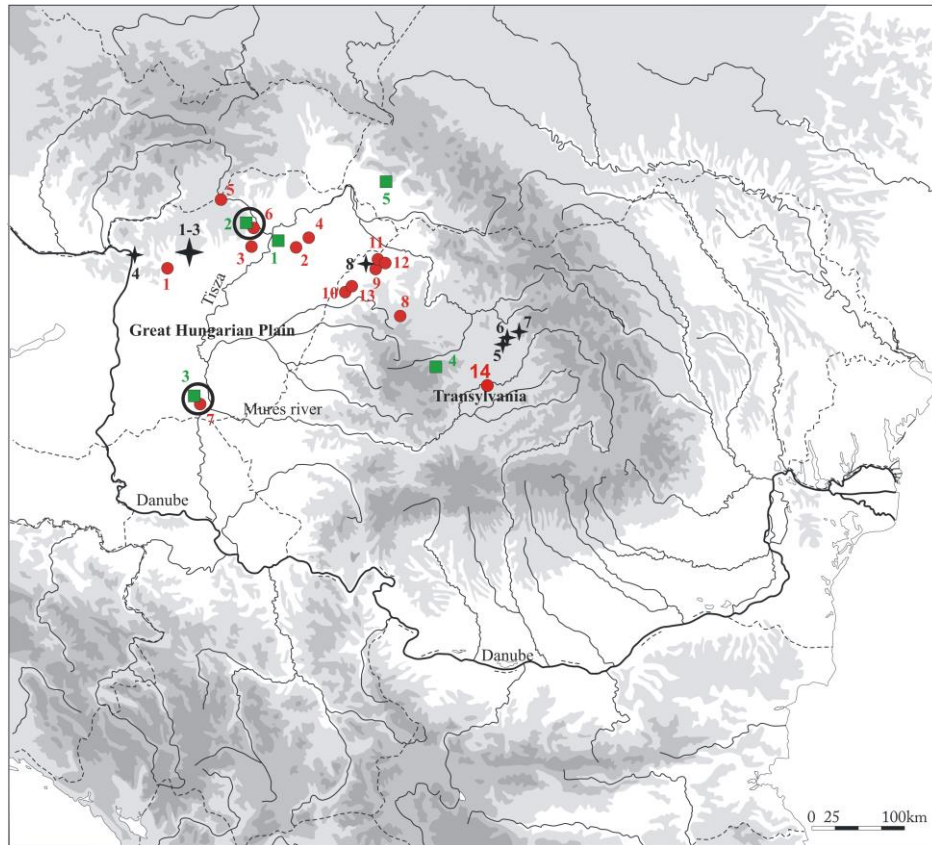


Fig. 8. Distribution map of the sites mentioned in text. Black stars: LT B2-C1 graves containing crafts-related tools and instruments (see list no. 1). Red dots: LT B2-C1 pottery workshops (see list no. 2). Green squares: settlements with workshops and traces of iron processing (see list no. 3).

