

SOME THOUGHTS ON LATE IRON AGE CERAMIC DISCS

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Ceramic discs of various sizes are a common object type found in Late Iron Age sites. We can only speculate about the function of these secondarily formed finds, made from broken vessels. So far, their interpretation has included use as game pieces, tokens, counting tools, slingshot balls, ritual objects, spindle whorls, or even “primitive” means of payment. Archaeological research – apart from a few studies – has not dealt with these objects in detail. In general, pieces that are more elaborately rounded and/or drilled are more often presented in publications, omitting possible half-finished or broken discs from the record. This study aims to address this issue by examining the type of finds through the analysis of ceramic discs discovered at the fortified settlement of Tihany–Óvár.

Keywords: Tihany–Óvár, ceramic disc, Late Iron Age, Celts

Ceramic discs² of various sizes from the Late Iron Age (second half of the 5th century BC–Roman conquest) have captured the imagination of researchers since the turn of the 19th–20th centuries, as evidenced by the descriptions and interpretations found in the list of general object types of the finds. Their nomenclature has not been standardised since then, and in the literature, we also encounter descriptive, neutral (*Tonscheibe*, *Tonreife*, *Scherbenrondelle*, *rondelle en terre cuite*, *agyagkorong[ocska]*, *cserépkorong*) and interpretative (clay jeton, *fusaiole*, *Spinnwirtel*, spindle ring) definitions. Apart from the publication of a few appealingly crafted specimens and their possible interpretations, the find type, despite its wide distribution, has not received special attention in archaeological research. Except for a few studies on ceramic discs from some sites (GUILLOT 1972; CHARDRON-PICAULT 2004; VARAZDIN & VENCLOVÁ 2006, 413–416), only a few archaeologists have selected “semi-finished” or at least roughly disc-shaped, as well as broken ones, for the figure plates presenting the finds. Consequently, we do not have precise information about their proportion at different sites. When analysing the ceramic discs found during the excavations at the Tihany–Óvár high-altitude oppidum, we were curious to see whether it was possible to go beyond the traditional framework of interpretation (Fig. 1).



Fig. 1: Ceramic discs found during the 1999 Tihany–Óvár excavations in the so-called “Cellar area”
(photo: László György)

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² In Hungarian archaeological literature, the object type is usually referred as clay discs („agyagkorong”), which is not fully accurate as these finds are made of (fired) ceramic (!) potsherds. I would like to thank László Gucci for his comments on this.

CERAMIC DISCS FOUND IN TIHANY-ÓVÁR

Excavations were conducted in 1999–2000 at the late La Tène fortified settlement of Tihany–Óvár by Judit Regenye, during which she opened an area of approximately 1200 m² in Felsőóvár. The excavations not only affected the internal structure of the settlement, but also partially cut through the rubble of the outer rampart on the western side of the site (MARTON & REGENYE 2005). The topic of our study is the ceramic discs identified during the processing of the late La Tène finds excavated in the latter area (Trench 1, Trench 1: collectively referred to as “cellar”, ~50 m²). This spot yielded at least 26 discs made from Late Iron Age pottery fragments.³ In terms of their distribution, almost half of the discs – 14 specimens – came from the deep storage pit located in the northwestern corner of the “cellar” (SE 11), 2 from the rubble of the rampart (SE 2–3), 3 from the demolition of the rammed yellow plastered walking surface (SE 5), 1 from also a deeper pit located in the middle of the western side of the trench (SE 7), 5 from the general cover layer overlying the archaeological features (SE 1), and 1 can be interpreted as a scatter find (SÖRÖS in press). As for their dispersion, no explicit order can be observed.

Each of the examined object types was made of fragments of broken vessels. Except for four orange, beige-coloured specimens, all potsherds are grey to dark grey. Among them, we also find pieces from the shoulder and belly of high-quality pots and more gracile vessel types (e.g., cups?), a side of a bowl decorated on the inside, and bottom parts. When selecting the fragment to be processed, it was not a consideration that the disc should be completely flat when laid on a horizontal surface, but at the same time, there are no strongly convex discs among the Tihany specimens. In only two cases can it be observed that the base of the vessel is on the edge of the disc, which slightly influenced the symmetry of the object (*Fig. 2. 11, 23*). In the Tihany material, only ~8% of the object type was made of base fragments, which is also interesting because the base of the vessel is either rounded or completely flat depending on the type and can therefore be roughened more easily (such are known, for example, from a Roman context in Autun: CHARDRON-PICAULT 2004, *Fig. 6. 6, 7. 8*). It seems that in the case of the decorated examples, eight in total, it was irrelevant where the decorations (net, zigzag, garland patterns), the grooves, or the banded burnishing were on the fragments selected for roughening (*Fig. 2. 4, 7, 12, 16–17, 24, 26–27*).

Among the Tihany discs, we also find semi-finished, finished, and damaged ones, while some broke during use. Making a clear distinction between the groups is not always possible, as most of the specimens are not completely round, and straight fracture lines can also be observed on the edges of some discs. Therefore, it is difficult to determine whether these factors influenced the object’s use value or not. It seems certain that at least nine ceramic fragments were damaged during production or use (*Fig. 2. 6, 8, 18–22, 27*). Shell-like fractures can be observed along the edges several times, based on which the production process can be well reconstructed (see later). Subsequent grinding traces can only be observed on one disc made from a Late Bronze Age/Early Iron Age fragment (*Fig. 2. 5*); this technique was not typical of the Late Iron Age specimens in the Tihany material. However, the dating of this is uncertain, due to the mixed nature of the assemblage. As for the dimensions of the undamaged discs, the smallest ones are ~3 cm, the medium ones ~4–7 cm, and the largest ~9 cm in diameter. The weight of the intact discs at the site varies between 6 and 82 g, where the measured value increases proportionally to the diameter of the discs, taking into account the thickness of the worked fragment.

Among the Tihany discs, two drilled examples (hole diameters: 0,7 and 1,7 cm) and one partially drilled specimen can be found (*Fig. 2. 22–23, 25*). The holes were probably made after roughing them out, which seems to be supported by the fact that the holes are located in the middle of the fragments. The subsequently drilled rings with a large hole diameter are generally referred to in the literature as spindle rings.⁴ In this study, we specifically focused on the secondarily formed discs, while the objects intentionally made to be spindle rings are not discussed here.

³ Additional discs were also found during the excavation in other trenches and sections; their processing is currently ongoing.

⁴ The definition as a spindle ring/whorl is unlikely to be correct in all cases, as small weights were needed for several work processes during textile production. I would like to thank Orsolya Zay for her clarification regarding the use of the object type.



Fig. 2: Tihany-Óvár, 1–27: ceramics (SE 1: 6, 11, 19, 21–22; SE 2/3: 5, 9; SE 5: 2, 8, 18; SE 7: 25; SE 11: 1, 3–4, 10, 12–17, 20, 23–24, 26–27; spare find: 7) (photos: László György, drawings: F. Zsófia Sörös)

THE DISTRIBUTION OF CERAMIC DISCS (Fig. 3)

As mentioned above, the find type is distributed throughout the La Tène culture. It is no coincidence that Tihany–Óvár is not the only late La Tène high-altitude fortified settlement where drilled and undrilled discs occurred (e.g., Budapest–Gellérthegy: B. BÓNIS 1969, 193, Bükkszentlászló–Nagysánc: B. HELLEBRANDT, 1992, 48, VI. 10, VII. 3, XI. 2, 1. t. 4, Bratislava–Staré Mesto: ČAMBAL 2004, 69, LXXV. 1–11, Plavecké Podhradie–Pohanská: PAULÍK 1976, XIII. 9–10, LXXV). In addition to fortified settlements, they are also commonly found in the find materials of both contemporary and earlier inhabited open settlements such as Ménfőcsanak (TANKÓ 2020, 185, XXXIII. 28, XLIII. 6, XXXVI. 1), Perkáta–Nyúli-dűlő (GARCZIK 2022, 129–130, Fig. 6–7), Szeged, Kiskundorozsma–Tóth János dombja I (SÖRÖS 2024, 91, Fig. 27. 2, Fig. 29. 4), and Szelevény–Sweiger tanya (CSEH 2003, Fig. 8. 5), among many other sites in Hungary.

Although rarely, pierced discs, which can be interpreted as spindle whorls/weights, are also present in burials or in contexts interpreted as burials. In the case of Vezseny–Kisdebreccen, a ceramic disc with a larger perforation was found with a Hungarian-type belt chain, a comb-decorated, graphite-tempered *situla*, a bronze bracelet, a ring made of bronze wire, and an additional ceramic fragment. In the case of the disc, it is difficult to determine whether we are dealing with a secondarily formed specimen or not (STANCZIK & VADAY 1971, Abb. 1). A “clay circle” is known from Jászládány, probably also from a burial (HUNYADY 1957, 119). Placing the find type in burials suggests a possible symbolic meaning of the finds. 104 discs

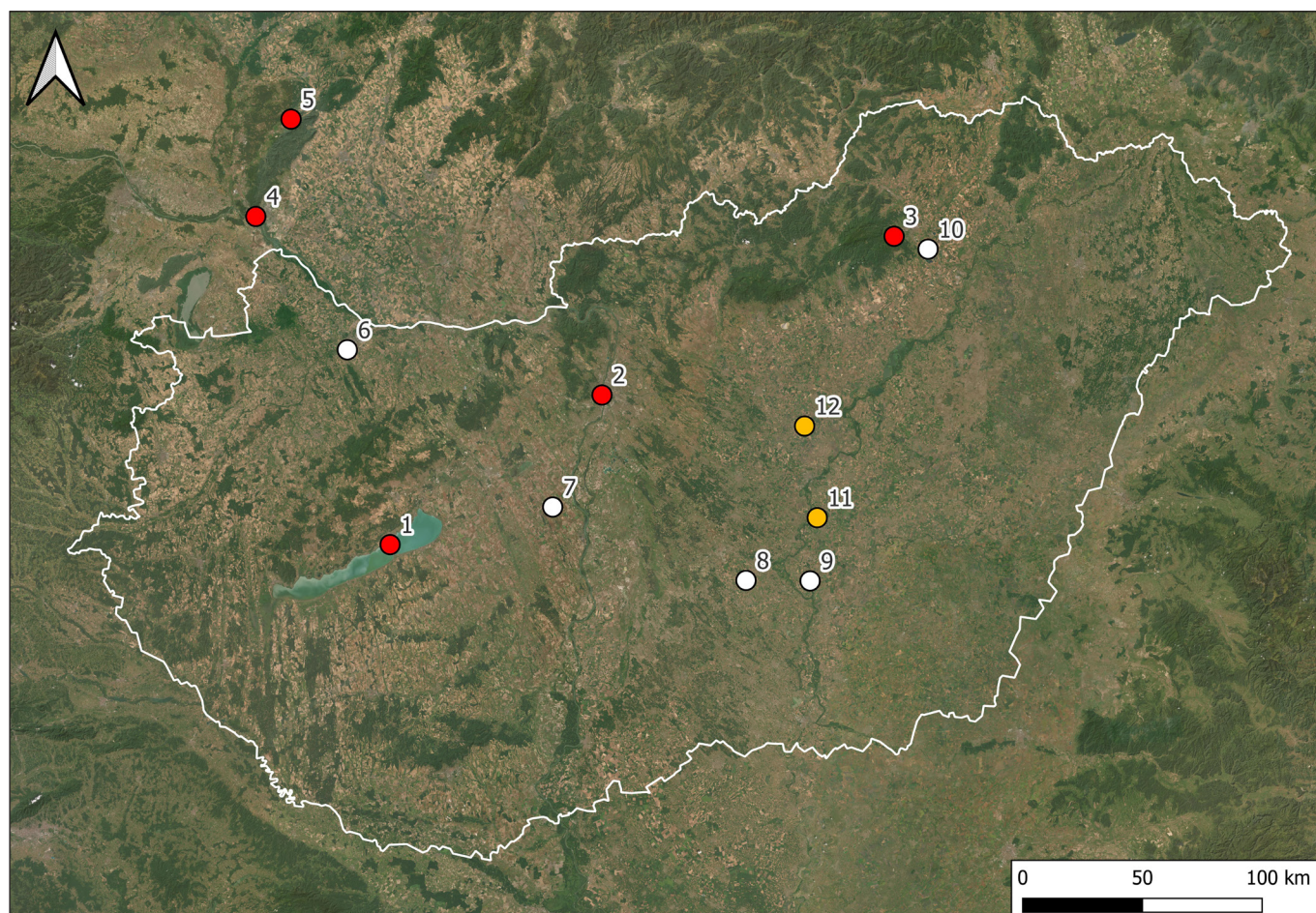


Fig. 3: Sites from the Carpathian Basin mentioned in the study (red: oppidum, yellow: grave, white: open settlement):
 1: Tihany–Óvár (MARTON & REGENYE 2005), 2: Budapest–Gellérthegy (B. BÓNIS 1969), 3: Bükkszentlászló–Nagysánc (B. HELLEBRANDT 1992), 4: Bratislava–Staré Mesto (ČAMBAL 2004), 5: Plavecké Podhradie–Pohanská (PAULÍK 1976), 6: Ménfőcsanak (TANKÓ 2020), 7: Perkáta–Nyúli-dűlő (GARCZIK 2022), 8: Szeged–Kiskundorozsma–Tóth János dombja I (SÖRÖS 2024), 9: Szelevény–Sweiger tanya (CSEH 2003), 10: Sajópetri–Hosszú-dűlő (SZABÓ 2007), 11: Vezseny–Kisdebreccen (STANCZIK & VADAY 1971), 12: Jászládány (HUNYADY 1957, 119) (map: F. Zsófia Sörös)

were found in the *oppidum* of Corent, 70 of which come from a cult area and 18 from profane environments, not far from the latter (POUX et al. 2002, 76–79). A large number of discs occur in some sanctuaries dated to the Roman Age, which suggests that they may have been used as offerings (CHARDRON-PICAULT 2004, 335–337; TUFFREAU-LIBRE 1994).

QUESTIONS CONCERNING THE CHÂÎNE OPÉRATOIRE OF THE DISC PRODUCTION

When interpreting the finds, it should be emphasised that the discs were, without exception, made from fragments of broken ceramic vessels and that they were of secondary use. This can be explained by the personal connection to the objects and their memory, or, more simply, also by economic reasons. The latter possibility raises the question of why discs made for the desired purpose are not typical in the archaeological material compared to the secondarily made discs, since their manufacture would have meant less energy investment. The answer may lie in the technological knowledge gap between the potters and the rest of society, or in limited access to the means of production. The making of the discs was done in a relatively simple way: the protruding edges of the chosen ceramic fragments were knocked down with a hard object until they became almost round; this is indicated by the shell-like fractures observed on the edges of the discs.⁵

Based on the easier production method, we could assume that it could have been practised by members of the community in a wide, democratic way. This is complemented by the approximately 950 discs excavated in Autun/*Augustodunum*, which were found in the artisan quarter from various Roman Age contexts (CHARDRON-PICAULT 2004, Fig. 14). Regarding the group of makers and the knowledge and tools required for the production, it cannot be excluded that they may have varied by region and period, despite the fact that several similarities can be discovered in the design of the discs (size range, method of production, nature of selected ceramic fragments). Perhaps this difference is also indicated by the discs found in Tihany, most of which are not perfectly round. The latter can be explained by the semi-finished state of the objects, but also by the lack of fine technical knowledge.

CLASSIFICATION AND INTERPRETATION POSSIBILITIES OF THE OBJECT TYPE

Even though the ceramic discs are round or tend to be round and are secondarily formed, we can discover many differences between them based on their dimensions, design, thickness, and possible perforation. For easier comparison by site, we suggest using the following code system to quantify them more easily (Table 1):

Table 1: The proposed code system

Size	Edge	Drilled?	Diameter of the drilling
I – Small (2–3,9 cm)	A – roughened	1 – Undrilled	a – small (~0,6 cm)
II – Medium (4–6,9 cm)	B – polished	2 – Pierced	b – big (>1 cm)
III – Big (7–11,9 cm)		3 – Semi-drilled	c – irregular

Using this system, nearly two-thirds of the discs found in Tihany from the “cellar” area are characterized by medium-sized, roughened, undrilled examples (II.A.1). These are followed by small-sized, roughened, undrilled (I.A.1), and then large-sized, roughened, undrilled discs (III.A.1). The number of drillings in the entire find assemblage is negligible, the site yielded only three: one example pierced with a small-diameter hole (II.A.2.a), one half-drilled with a similar size (II.A.3.a), and another disc with a large-diameter hole (II.A.3.a). This is partly in contrast to the earlier, open settlement at Sajópetri–Hosszú-dűlő, dated to the 3rd–2nd century BC, from which at least 25 discs were also found (SZABÓ 2007, Pl. XIX. 15–16, XXXVII. 1, XL. 5, XLIV. 1–4, XC. 12–13, XCVIII. 6–8, CI. 12, CVIII. 1, CIX. 4, CX. 2, CXIX. 3–4, CXXIV. 12–15, CXXV. 2, CXXVI. 12). Here, it is striking that slightly less than half of the disc’s sides are polished – at

⁵ I would like to thank Zsolt Mester for his observations regarding the possible preparation method.

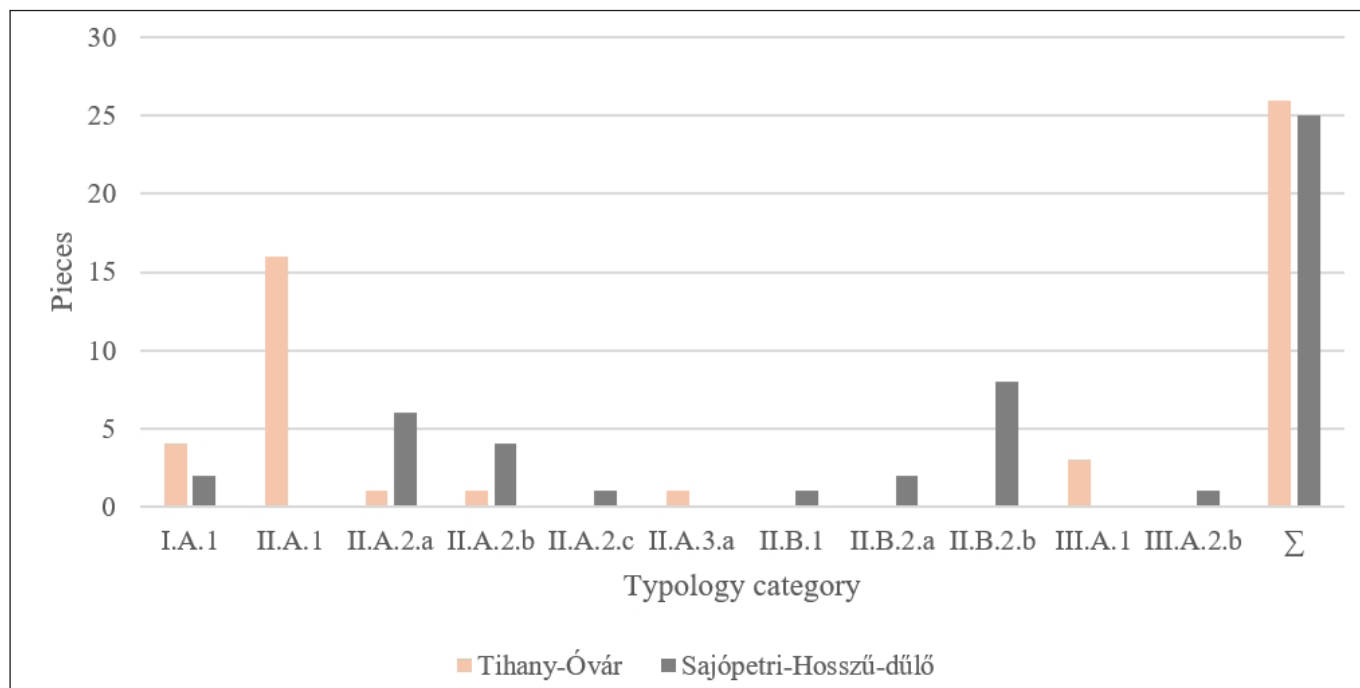


Fig. 4: Comparative results of the typological analysis of the discs found at Tihany-Óvár and Sajópetri-Hosszú-dűlő (diagram: F. Zsófia Sörös)

least according to the published drawings, they show a regular design –, and only three discs are drilled (Fig. 4). It is difficult to decide whether these varieties may be due to regional, chronological, or functional differences, or due to processing of the finds.

Several theories have emerged in the archaeological literature regarding the use of these discs, such as the possibility of identifying them as game pieces, tokens, “primitive” or internal means of payment, slingshot balls, cult objects, counting tools, plugs, and in the case of examples with larger diameter holes, as spindle whorls or other weights (e.g., B. BÓNIS 1969, 193; GUILLOT 1972, 160–164; POUX et al. 2002, 77–79; CHARDRON-PICAULT 2004, 333–337; VARAZDIN & VENCLOVÁ 2006, 413–414). Important distinguishing features of the objects are their size and, in some cases, their weight, as well as the presence or absence of a hole. A 2–3 cm diameter disc would probably have had a different function than a 7–8 cm specimen. When determining the function of drilled discs or rings, it is also essential to examine the wear marks on the objects. However, the question of whether we should consider discs with rough, unpolished edges as semi-finished products is a further one.

At Nēmčice nad Hanou, 65 discs were found in pit no. 503, among which we find both drilled and undrilled ones. Their density suggests (the possibility of) local production. Considering the antler dice known from the same feature, the object type can probably be interpreted as elements of some kind of game (ČIŽMÁŘ et al. 2024, 306, Fig. 7. 27–38, 8, 9. 1–6). The use of the find type as a game piece can also be indirectly supported by an engraved stone disc, approximately 19 mm in diameter, found in Manching, which has parallels made of glass, stone, and bone in Italy (VARAZDIN & VENCLOVÁ 2006, 416; SIEVERS 1992, 213, Abb. 103). In addition to game discs, one of the most common interpretations in the literature, in connection with the discs with large perforations, is spindle whorls. The above-mentioned Sajópetri site provides an opportunity to examine the distribution of ceramic discs and whorls, as well as spindle whorls, which reveals that while the former were found in 13, the latter, 26 specimens, were registered in 14 archaeological features. Both object types could be observed in only four of the latter (three buildings, one pit complex). In this regard, it is questionable whether this can be explained by the preferences of individual households or rather by functional differences. Only a handful of discs with subsequently created markings on their surface are known so far. Such ones were found, among others, from Libušín and Staré Hradisko in the Czech Republic (VARAZDIN & VENCLOVÁ 2006, 413–414, Fig. 5. 1, 6). In the case of discs tempered with

graphite, a further possible interpretation is that they were used to polish and harden the surface of vessels. However, not all the ceramic fragments used for this purpose are disc-shaped; their common feature is their worn edges, which became polished due to their use (VENCLOVÁ et al. 2019, 188, Fig. 1).

CONCLUSIONS

The above results show that we cannot outline a unified picture regarding the design of ceramic discs during the La Tène period. However, it can be generally said that the objects made secondarily of roughly flat vessel fragments can be smaller and larger, with roughened (semi-finished?) and polished edges, drilled and undrilled too. The quality of the vessels and their original decoration do not seem to have played a prominent role in the selection of fragments needed to make them (GUILLOT 1972; POUX et al. 2002, 76–80; CHARDRON-PICAULT 2004; VARAZDIN & VENCLOVÁ 2006, 413–414). The listed characteristics most likely determined the function of the objects, which may have varied depending on the site, region, or period, without losing sight of the possibility of their multiple usages. For a more precise interpretation of the object type known primarily from settlement materials, it would be important to examine not only the finished but also the semi-finished/damaged discs.

Though the analysis of the Tihany material that forms the basis of this study did not bring us any closer to deciphering the use of these finds, we pointed out that the introduced code system is capable of making the discs from different sites in terms of production and form statistically more comparable. By publishing and analysing further finds, we can come closer to a better understanding of the function(s) of the object type in the future, outlining even chronological and/or regional differences in their use. We hope that the discs published from Tihany–Óvár will contribute to this.

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