BASATANYA REVISITED: TWO PERIODS OF A COPPER AGE CEMETERY IN THE CARPATHIAN BASIN

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Abstract

In Eastern Hungary, we find many cemeteries from the Copper Age over an extensive area. One of them, Basatanya, represents the Tiszapolgár culture (Early Copper Age) in its period I, and in period II the Bodrogkeresztúr culture (Middle Copper Age). The directions of the graves fill the angle span of the solar arc, thus the graves point towards where the Sun can rise or set. Westerly orientation (the skull points West) is almost universal in Period I. In Period II, easterly orientation also appears. The cemetery contains 156 graves and may have been used for two centuries.

Key words: Copper Age, grave orientation, physical anthropology.

An Outlook

During the Early Copper Age (approximately 6000 years ago) dramatic changes took place in mortuary practice in the Carpathian Basin and in East/South Europe. Large formal cemeteries were established. These cemeteries were usually isolated in the landscape and entirely separate from settlement sites; they replaced the Neolithic pattern of burying the dead in and around settlement sites. Ida Bognár-Kutzián characterizes the Copper Age cemeteries this way in her exhaustive work on Tiszapolgár – Basatanya (Bognár-Kutzián 1963).

The orientation of the graves in these cemeteries has been connected to the annual path of the Sun. The distribution of the grave directions fills the solar arc, the segments of the horizon where the sun can rise or set. The amplitude of the local solar arc depends on the geographical latitude (Barlai 1980; Barlai, Bognár-Kutzián, Zsoldos 1992).

The Basatanya cemetery in Eastern Hungary is one of the best excavated and best studied cemeteries. Its "lifetime" covers about two hundred years – about 8-9 generations. The cemetery's first and second periods represent the Early Copper Age Tiszapolgár and the Middle Copper Age Bodrogkeresztúr cultures respectively. It contains 156 thoroughly documented graves: 60 of them belong to period I, a further 7 to a transition phase, and the remainder (89 graves) to period II. The transition phase lasted about 15 years.

In Fig. 1 we can see all the three phases of the Basatanya cemetery. Along the "rectified" horizon each histogram shows the number of graves with this angle of orientation (i.e. pointing this direction). East is at 90°, South at 180° and west at 270°. The average geographical latitude of the Carpathian Basin is 47.5° and the corresponding solar arc is 72°. This means that sunrise takes place 36° to the north of equinoctial East at the summer solstice and 36° to the south of it at the winter solstice. Outside this part of the horizon, sunrise cannot be experienced. The same holds for the sunsets. Sunset takes place within a 72° span centred upon the direction of equinoctial West.

The Figure clearly shows that the population of period I strictly followed the rule of orienting their deceased in a westerly direction, with the skull pointing towards the west in the direction of the setting sun.

The only exception is a man about 35 years old. His grave goods are not exceptional. The direction of the grave is 114°, which is inside the arc of the rising sun. This value corresponds to a 24° southward deviation from equinoctial East. Period I of the cemetery has been analysed in detail at the SEAC Conference held in Tartu (Barlai 2002). Nonetheless the main results should be mentioned here briefly.

The conclusion was reached that a group of the population whose graves are oriented inside a narrow central part of the histogram – within a narrow range around the equinoctial East – West direction – probably enjoyed a privileged position within this community.

This statement was supported by the fact that the members of this group – mostly men – were outfitted with rich grave goods, e.g. numerous ceramics, flint, quartzite, obsidian blades and scrapers, axe-hammers made of red deer and roe deer antlers, scapulae and shoulder blades of aurochs, mussel shell, silurid vertebrae, one mace head, mandibles of wild boars and domestic sows, tusks, and further different bones of domestic and wild animals. The clustered orientations represent

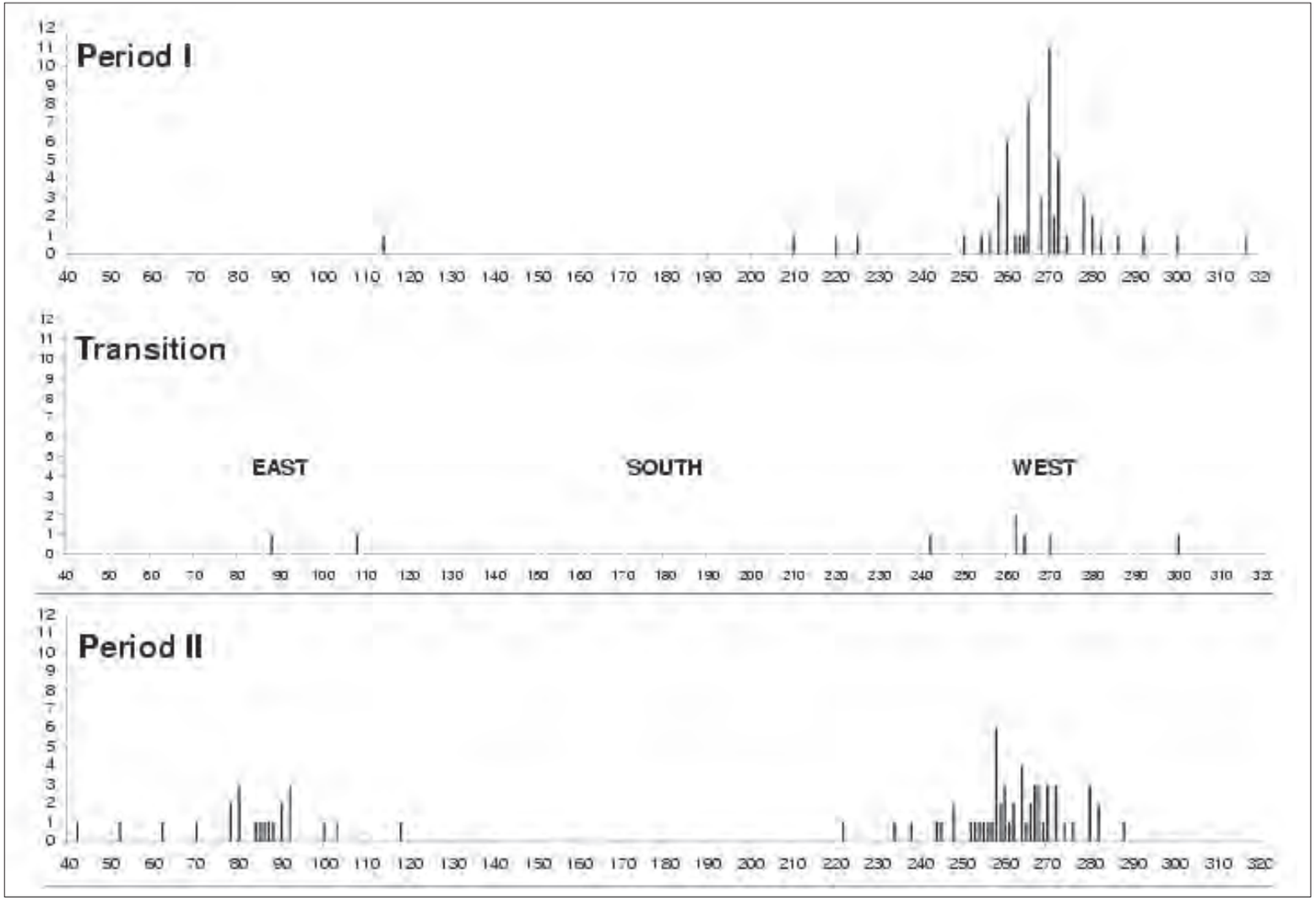

Fig. 1. Distribution of the graves' orientation in the different periods.

a link between them from the archaeoastronomical point of view. We do not know what kind of events brought the first period to an end. Something serious or tragic must have happened.

The next phase of the cemetery, the transition phase, presents a desperate picture. Seven individuals were buried here, two men and five elderly women (40-45 years in age), one of them with a child. The grave goods were mostly modest: several ceramics and domestic animal bones. Exceptionally, one of the men has a flint blade, an axe-hammer of antler, mandibles of wild boar and of a sow, bones of young sheep and numerous ceramics. One woman, apart from some ceramics, has two bone awls, a mussel shell, a pebble, and six pots. There are two eastward and five westward orientations.

In period II, the most conspicuous feature is that a group appeared which followed the rule of orientation towards the east. This group, consisting of 22 deceased, represents one quarter of the total adult population in this period. Were these easterly oriented people newcomers in the Carpathian Basin or does this opposite practice of orientation reflect an ideological split within the community?

There is no difference between the grave goods in the easterly and westerly oriented graves.

None of the period II graves contained exceptional deposits. In particular, while three axe hammers made of deer antler were found in period I graves – all of men – none could be found in period II graves. Neither could any mace heads or arrow heads made of deer antler, although these are common in men's graves in period I. Tusks of wild boars or pigs – very common in period I – were few and far between in period II. This short comparison, incomplete as it is, sheds light on the fact that the dead were much better provided with grave goods in period I.

The Period I graves seem to be the product of a wealthy hunting (but also agricultural) society while period II represents a poorer, and perhaps more peaceful, agricultural one.

Some remarks on period I

Finally it is worth returning to the first period of the cemetery. Bognár-Kutzián's monograph on Basatanya – apart from the descriptions of the excavation and the graves, and the inventory of the finds – contains as an Appendix a spectrochemical analysis of the copper artefacts and, included in the volume, a typological study of the human burials by a physical anthropologist. Interdisciplinary attitudes like this were not widespread in the middle of the last century.

The study in question was undertaken by J. Nemeskéri, a well-known anthropologist of that time.

A descriptive typology was obtained using contemporary methods of physical anthropology. This resulted in different anthropological types being identified among the deceased. So-called "Protoeuropid" and different "Mediterranean" types were found. It was possible to determine the type of about 80% of the period I skeletons.

To me, the combination of orientation and anthropological type seemed promising. In fact, those who were buried facing a direction within the cluster in the central part of the histogram (i.e., in a narrow range around due west), and who had exceptionally rich grave goods, turned out to be mostly Protoeuropid (or a mixture of Protoeuropid and other types), and were almost exclusively men (Barlai 2002).[1]

No such method could be applied in period II. Here, no more than 50% of the skeletons were suitable for anthropological analysis, and no firm conclusions could be drawn.

The classification used in my former paper has been strongly criticised at the present conference, partly for being old fashioned and obsolete, and partly for being apt to be misused by harmful and discriminating ideologies, as has already happened in the past.

I will try to formulate my personal response to all these objections. I definitely reject any form of racism. The entity represented by all features that could be called (for example) a Mediterranean type could be expressed using the concepts of modern molecular genetics, DNS research or population genetics in an equivalent way. Being an astronomer I am not able even to venture an opinion.

This old-fashioned database included in the Basatanya volume nonetheless carries a piece of information. We should not throw out the baby with the bathwater. Reversing the argument: it may be a challenge for these new methods to determine if there exists any correlation between their results and the statements obtained using the old ones.

Acknowledgement

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[1] Sadly the details of this analysis have become almost incomprehensible owing to a printing (or possibly an editorial) error.

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NAUJAS ŽVILGSNIS Į BASATANIJĄ: DU VARIO AMŽIAUS KAPINYNO PANONIJOS LYGUMOJE LAIKOTARPIAI

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Santrauka

Prasidedant senajam vario amžiui, maždaug prieš 6000 metų, kapinynai buvo kuriami atskirai nuo gyvenviečių. Šiuose kapinynuose kapai buvo orientuojami, atsižvelgiant į vietovės horizonte esančius taškus, kuriuose Saulė teka ir leidžiasi.

Basatanijos kapinynas yra Panonijos lygumoje, Tisos upės pakrantėje. 156 kapai priklauso dviem laikotarpiams, kuriuos sieja trumpa, apie 15 metų, pereinamoji fazė. Iš viso kapinynas galėjo būti naudojamas apie 200 metų, arba 8–9 gyventojų kartų. Pirmuoju laikotarpiu, senajame vario amžiuje, mirusieji buvo laidojami galvomis į vakarus. Šių mirusiųjų (o jų daugumą sudarė vyrai, kurie bendruomenėje veikiausiai užėmė priveligijuotą padėtį) kapai buvo išdėstyti rytų–vakarų ašimi su nedideliais nukrypimais. Rastos įkapės yra būdingos medžiotojams ar net kariams. (Tiesa, ankstesnis pirmojo laikotarpio tyrimas (Barlai, 2002), pagrįstas antropologinių tipų analize, ateityje turėtų būti kritiškai peržiūrėtas.)

Analogiškas tyrimas buvo atliktas ir analizuojant antrąjį kapinyno naudojimo laikotarpį. Laidosena pakito. Maždaug ketvirtis mirusiųjų buvo palaidota ne galvomis į vakarus, o priešingai – į rytus. Jų įkapės byloja apie neturtingą taikių žemdirbių pobūdžio bendruomenę.

Vertė Vykintas Vaitkevičius