CONNECTED OR ISOLATED? THE SPACES OF THE LIVING AND THE DEAD IN IRON AGE EAST LITHUANIA

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The worlds of the living and the dead are connected to one another in people's worldviews and their physical setting in the landscape is a material expression of this relationship. In Lithuanian Iron Age (Roman period–Viking Age) archaeology, burial sites have been rarely approached from this perspective, except for some stereotypical remarks, e.g. it has been argued that water is a boundary between the spaces of the living and the dead. The paper analyses the spatial relationship between the East Lithuanian hillforts and barrow cemeteries and discusses how it reflects the local communities' perceptions of their communication with their dead. The study is based on five spatial perspectives: distance, direction, location in the terrain in respect to bodies of water, communicative relationship, and visual contact. It concludes that no effort was made to isolate the burial areas from those for the living, i.e. the living maintained spatial bonds with their dead and shared one landscape.

Keywords: barrow cemetery, hillfort, spatial relationship, visual contact, East Lithuania.

Gyvųjų ir mirusiųjų pasauliai žmonių pasaulėžiūroje yra susiję, o jų fizinė padėtis kraštovaizdyje yra materiali šių sąsajų išraiška. Lietuvos archeologų geležies amžiaus (Romėniškojo–Vikingų laikotarpių) laidojimo paminklai šiuo požiūriu mažai tirti, išsakyta daugiau stereotipinių pastebėjimų, pvz., teigiama vandenį buvus magiška riba tarp gyvųjų ir mirusiųjų erdvių. Šiame straipsnyje analizuojami erdviniai ryšiai tarp Rytų Lietuvos piliakalnių ir pilkapynų bei aptariama, kaip jie atspindi vietos bendruomenių santykio su mirusiaisiais suvokimą. Tyrime remiamasi penkiomis erdvinėmis perspektyvomis: atstumo, krypties, padėties vandens telkinių atžvilgiu, komunikacinių ryšių ir vizualaus kontakto. Teigiama, kad aptariamos bendruomenės nesistengė atskirti gyvenamųjų ir laidojimo erdvių, gyvieji, dalindamiesi kraštovaizdžiu su savo mirusiaisiais, siekė su jais išlaikyti erdvinius ryšius.

Reikšminiai žodžiai: pilkapynas, piliakalnis, erdviniai ryšiai, vizualus ryšys, Rytų Lietuva.

INTRODUCTION

The perception of the relationship between the worlds of the living and the dead has been one of the major elements of human culture throughout time. It can vary greatly, ranging from fearing the dead to maintaining them as part of the community (Huntington, Metcalf 1991; Parker Pearson 2003; Williams 2003). All peoples and cultures have their own images of this relationship and these images are reflected in some way not only in their ideology, but also in the material culture, and thus in the archaeological record. The spaces of the living and the dead are a widely studied topic in archaeology,

but certain barriers to research lie within the material itself. The data from burial and living sites differ by their very nature as the former reflect a materially expressed concept of the afterlife, the latter lost, cast off, or abandoned parts of material life. For this reason, the integration of these two data sources into one image, especially an image depicting a past worldview, is a challenging task.

In Lithuanian archaeology, burials have long been the main object of research and have been approached from many perspectives, but very seldom from that of the relationship between the living and the dead. Attention has especially focused on the spiritual culture visible through burial customs (e.g. Gimbutienė 1985, pp.174-178; Michelbertas 1986, pp.222-321; Tautavičius 1996, pp.284-285; Banytė-Rowell 2007, pp.170-171). Although the topic might seem exhausted, only a few stereotypical remarks have been proposed so far: the dead were believed to continue their earthly life in another dimension; the property of the dead was taken to the afterlife in form of grave goods; inhumation and cremation reflected different perceptions of the soul's post-mortem existence; etc. However, very few insights have been suggested as to how the Balts saw the relationship between themselves and their ancestors: whether they made an effort to maintain a close link or, vice versa, to isolate the two worlds; whether they reckoned the dead to be part of the community or a bygone past; and whether the cultural norms or merely the relief determined the spatial distribution of the living and burial zones. Most commonly, the perception of water as a sacral boundary between the world of the living and that of the dead is stressed (e.g. Vaitkunskienė 1995a, pp.23-25; Bliujienė 2013, pp.199–203), the other approaches being rather sporadic. The spatial proximity of burial and settlement sites and the similarity of their

topographic setting are interpreted as evidence of the idea of communication between the living and the dead (Michelbertas 1986, p.225). It has been argued that the orientation of the dead towards sacral uninhabited areas shows that '... beyond the hills and water, at the sources of the rivers, and in the forests lay the land of the dead imagined by the Balts' (Žulkus 2001, p.11, author's translation). Attention was also paid to the visibility of the burial sites (Bliujienė 2013, pp.224-225). The function of barrows as houses of the dead is emphasized, the stone kerbs or ditches being interpreted as a boundary that protected one from evil spirits or from the dead themselves (e.g. Michelbertas 1986, pp.227-228; Vaitkunskienė 1995a, p.27; Bliujienė 2013, pp.210-211). The hypothesis of burial areas as territorial markers (Saxe 1970, pp.119-121; Goldstein 1981, pp.59-61; Morris 1991; Charles 1995, pp.78-79) was accepted (e.g. Kurila, Kliaugaitė 2008, p.26; Bliujienė 2013, p.207; Kurila 2013, p.51; Simniškytė 2013, pp.48, 91). Traces of ancestor cult practices have also been identified (Vaitkunskienė 1995b1). In summary, it can be stated that in most cases, the focus of the interpretations in the field are analogies from written sources and mythology in which pre-Christian motifs are not so easily distinguishable. The spatial structure of the burial sites has been studied from only several perspectives: internal visual links (Kuncevičius et al. 2012, pp.19-23), the orientation of the dead towards the features of the relief (Kurila 2013), and the distribution of barrow cemeteries in respect to ancient roads (Vaitkevičius 2007).

In recent years, attention has begun to focus much more strongly on Iron Age settlements, economy, and lifestyles. However, cultural landscape research, which integrates domestic, social, and burial areas and which approaches the worldviews of the communities involved in the formation of these landscapes (see Parker Pearson 2003, pp.124–136;

¹ Even though the objects identified in this paper as traces of a ritual fire for remembrance of the dead could have actually been household pits, this interpretation is nevertheless interesting from a historiographic perspective as it was a novelty in the topic.

Tilley 2010), is still in its initial stage in Lithuania (see Bliujienė 2013, pp.198–226). The spatial relationship between burial sites and hillforts has also not been sufficiently studied, aside from a brief remark that this relationship had been shifting (Bliujienė 2013, p.209). Even the inquiry into instances of burials in hillforts (Daugudis 1992), after concluding that all these burials are asynchronous to the hillforts, failed to continue the discussion into the memory of ancient castles and how such memories probably prompted the local communities to choose such places for burial. A recently proposed discussion on the topographic relationship between medieval hillforts, settlements, burial areas, and sacred places (Petrauskas 2017) is a rare exception in the field.

The emotional ties between the living and the dead are difficult to detect archaeologically. The empirical data available to archaeologists can only serve as indirect evidence of such ties and the set of criteria can be unique in every study. This paper attempts to shed some new light on the topic by investigating a hypothesis that the relationship between the worlds of the living and the dead should somehow be reflected in their location in the natural landscape. The approach is built upon five perspectives: the distance between the living and burial zones: the direction of the burial zone from the living one; the location in the terrain in respect to bodies of water; the communicative relationship; and visual contact. They are assumed to reveal a collective aspiration to set or break the boundaries between the living and the dead.

The region selected for the study is Iron Age (the Roman period to the Viking Age, c. $3/4^{th}$ – $11/12^{th}$ century) East Lithuania, i.e. during the East Lithuanian barrow culture (for a general overview, see Kurila 2016; Vengalis 2016). Archaeologically, the region is represented by mainly barrow cemeteries and hillforts. These two site categories cannot, of course, create a complete image of the cultural landscape as many sites have probably been destroyed and, more vitally, data are still clearly

lacking about unenclosed settlements, including those in the vicinity of barrow cemeteries (see Vėlius 2012, p.247; Vengalis 2015, pp.98-100). The future discovery of new settlements could conceivably change the model of many microregions, but the problem of their questionable contemporaneity to the barrow cemeteries would be critical. Hillforts were generally used for rather long periods (although their function might have changed over that time) and therefore their synchronicity with the neighbouring barrow cemeteries is in most cases highly probable. Nevertheless, the very concept of a hillfort cannot exclude an adjacent settlement. Hereinafter in this paper, the term 'hillfort' mainly refers to complexes that consist of the hillfort itself and any adjacent settlement(s).

It should also be noted that this paper does not equate the concept of living area (space, zone) with a solely residential area. The term is used to encompass all the activities of a living community. Hillforts are central not only for residential areas but also in respect to the economy, power, and religion. Physically, a hillfort is a place within the community's space which brings its members together. Therefore, their spatial relationship to the burial sites is even more relevant to the topic. Thus, from the perspective of spatial analysis, the relationship between hillforts and burials seems to best reflect the perceptions of the relationship between the living and the dead.

A detailed analysis of the problem is impossible in the framework of a brief paper and the subject itself allows only a study of an interpretative nature. Through the employment of an adequate methodology, an attempt has been made to reveal the physical links between the worlds of the living and the dead by considering these links a reflection of the spiritual links. In so doing, it is expected that some of the assertions anchored in archaeological literature will be verified and that new ones will be proposed, a contribution thereby being made to the complex research of the worldviews of the ancient Balts.

MATERIAL AND METHODS

For the study, the 21 086 km² area occupied by the East Lithuanian barrow culture was defined (after Kurila 2016, p.192, Fig. 1), conditionally, of course (Fig. 1). 16 125.5 km² of this area lies in the present-day Republic of Lithuania. The remaining area, which lies in the NW part of the Republic of Belarus, was not included into the study due to the lack of data with a precision sufficient for the applied methodology.

The database was created by compiling data from the Register of Cultural Property of the Department of Cultural Heritage under the Ministry of Culture (hereinafter the RCP) (Register 2016); the PROLIGIS database created by the Vilnius University Faculty of History (Proligis 2016); the interactive atlas of Lithuanian hillforts (Lietuvos 2016); atlases of Lithuanian archaeology (Lietuvos 1975; 1977); excavation report manuscripts stored in the Archive of the Lithuanian Institute of History; other literature (in the periodical Archeologiniai tyrinėjimai Lietuvoje [Archaeological investigations in Lithuania]; etc.). It was also supplemented by some newly collected archival data, mainly about destroyed barrow cemeteries (e.g. Kurila, Kurilienė 2010; Kurila 2011, etc.). A total of 326 hillforts

and 608² barrow cemeteries, individual barrows, and destroyed barrow cemetery sites have been registered in the aforementioned territory (i.e. in the Lithuanian part of it) (Table 1). Several barrow cemeteries, which were known from archival sources but for which location data were lacking or which were of questionable archaeological value, were not included in the database. Most of the sites (those protected in the RCP) have precisely-defined areas. For those sites with only point coordinates (mainly those recorded in the PROLIGIS database), conditional areas were created using 50 m buffers (encompassing roughly 7850 m²) for hillforts and 10 m (roughly 314 m²) for barrow cemeteries.

The total area of all the hillforts is 9.78 km². This, however, is a very approximate and conditional number as the officially protected territories of these sites are usually defined on the basis of not only their natural borders, but also criteria unrelated to prehistoric reality (the boundaries of the modern land plots, roads, buildings, new bodies of water, etc.). It is not uncommon for protected territories to be substantially larger than the natural boundaries owing to heritage protection strategies but in some cases, they are smaller than them owing to an ignorance of adjacent settlements.

Analysed territory (km ²)	16 125.5
Number of hillforts in the analysed territory	326
Total of all hillfort areas (km ²)	9.78
Total of all 1000 m buffer zones around hillforts (km ²)	1243.15
Number of barrow cemeteries in the analysed territory	608
Number of barrow cemeteries in the 1000 m buffer zones around hillforts	108
Density of barrow cemeteries in the analysed territory (cemeteries / km ²)	0.038
Density of barrow cemeteries in the 1000 m buffer zones around hillforts (cemeteries / km ²)	0.087
Density of barrow cemeteries outside the 1000 m buffer zones around hillforts (cemeteries / km ²)	0.034

Table 1. The study's database and the barrow cemetery densities

² The number of known and legally protected barrow cemeteries and isolated barrows slightly increased during the preparation of the study, but no additions to the database were made.



Fig. 1. Sites analysed in the study: 1 - barrow cemeteries within a hillfort's 1000 m buffer zone, 2 - other barrow cemeteries, 3 - hillforts, 4 - 1000 m hillfort buffer zones, 5 - other barrow culture in the present-day territory of Lithuania, <math>6 - other barrow culture in the present-day territory of Belarus, <math>7 - other barrow state border of the Republic of Lithuania. Drawing by L. Kurila.

The study focuses on barrow cemeteries which are located close to hillforts and thus able to be considered a single complex probably used by one community. In other cases, the relationship between the barrows and hillforts is uncertain. 1000 m buffer zones were created for all the hillforts (or their adjacent settlements) and a further analysis of the spatial relationship was conducted within these zones, which total 1243.15 km², i.e. about 7.71 per cent of the whole of the discussed territory. Such buffer zones are conditionally considered microregions, although without any claim of conformity to the concept of a real microregion, which should be defined by relief features and the situation of the sites themselves. 1000 m is considered a marginal distance which allows adequate employment of the selected methodological tools. This distance has also been accepted as effective in several other similar studies (Parker Pearson 2003, p.126; Bliujienė 2013, p.222).

Most of the barrow cemeteries are located outside the buffer zones, but this cannot in any way deny the obvious fact that the communities which buried their dead there had lived somewhere in the area at a larger or smaller distance. There are examples of barrow cemeteries with no known hillforts within a radius of 10 km (e.g. Aluona, Jurgionys, Kaniūkai, Kidarai, Maceliai, Senieji Maceliai, Versekėlė, and Vilkonys) and hillforts 10 km from the nearest barrow cemeteries (Bernotai and Girežeris). This is probably owing to some of the sites having been destroyed or being still unknown rather than their sparse distribution in the past. Not all communities had their own hillfort and the model for the landscapes of the living and the dead should instead be reflected in the settlementto-cemetery relationship rather than the hillfortto-cemetery one. One way or another, a general spatial relationship between the living area and the burial sites is unquestionable but the data needed to confirm it are lacking in many specific instances. The goal of this study, however, is not to search for new evidence of this relationship where it is unknown,

but rather to discuss its character and the links between the worldviews and the cultural landscape. Therefore the paper's database was limited to the microregions in the aforementioned sense, i.e. only those barrow cemeteries which lie within a hillfort's buffer zone were included in it.

Further analysis was performed using LiDAR (last return signal) and other cartographic data. The LiDAR layers were processed using Global Mapper v15.1 software and imported into an ArcGIS 10.1 interface as elevation grid data. 3D relief models were created in ArcGIS ArcScene 10.1 for some microregions. The LiDAR data allowed ancient bodies of water to be identified. ArcGIS 10.1 3D Analyst Viewshed and Line Of Sight tools were used to create visual contact models (the zone visible from a hillfort). The observer point was set on the highest open location at each hillfort (an earthwork or the hilltop's edge) and elevated another 1.6 m (i.e. human eye height). Of course, when analysing visibility, it is only possible to hypothetically assess the influence of the then vegetation. Presently, almost all barrow cemeteries and many of the hillforts are covered with forests and direct visual contact is rare. However, it can be argued that in the past, the hillforts and probably the burial areas were free from trees (and if they were not, visual contact with the barrow cemetery area, albeit forested, rather than the individual barrows should have been important to the local inhabitants, if visibility was of any importance). Therefore the LiDAR data analysis should be accepted as a suitable methodological tool independent of past vegetation.

RESULTS

Of the 608 barrow cemeteries, 108 (17.8 per cent) are located within a hillfort's 1000 m buffer zone (several that lie within the buffer zones of chronologically unrelated, i.e. Bronze Age or Early Iron Age, hillforts, were not included in the database). It must be noted that their density is nearly threefold larger inside the buffer zones than outside

them (an average of 0.087 and 0.034 barrow cemeteries/km², respectively, Table 1). The barrow cemeteries are located at different distances from hillforts³ without any significant regularity (Fig. 2). However, the closer they are to a hillfort, the higher their density (Fig. 3). There are, however, very few barrow cemeteries located extremely close to a hillfort, which comes as no surprise, as the hillforts were usually bordered by adjacent settlements, economic areas, and pastures while the areas for the dead were located further away. Examples of very close (about 100 m apart) hillforts and barrow cemeteries do, however, exist at Beižionys (Fig. 4), Bražuolė, Janonys, Moša-Naujasodžiai (Moša-Naujasodžiai Hillfort and Moša-Naujasodžiai, Moša-Skrebis, and Naujasodžiai Barrow Cemeteries), and Papravalė.

The direction of a barrow cemetery from a hillfort varies (Fig. 5). An attempt to analyse only the barrow cemeteries closest to hillforts (300 m or closer) also revealed no regularities. Thus it can be argued that no special effort was made to locate the cemeteries according to the

sunrise, sunset, or any other astronomic azimuths, which could have played an important role in mythological worldviews. Even if, on a general level, the world of the dead was believed to be in a specific direction, this idea was not expressed spatially in specific landscapes. The burial areas were probably selected according to other criteria: their distance from economic zones, the relief, the view, or easy communication (see below).

The general spatial link of the barrow cemeteries to bodies of water is very distinct. Few barrow cemeteries (e.g. Beižionys, Senieji Miežionys) lie



Fig. 2. The distances of the barrow cemeteries from the hillforts. *Graph by L. Kurila*.



Fig. 3. Barrow cemetery densities at various distances from the hillforts (the average number of barrow cemeteries within the 1000 m buffer zones of the discussed hillforts). *Graph by L. Kurila*.

500 m or further from the nearest river or lake. This may be partially an outcome of the study's data selection strategy, i.e. only those barrow cemeteries located close to hillforts were analysed and the latter have a strong spatial relationship to bodies of water owing to economic and defensive reasons. However, a preliminary inquiry from this perspective into the data for all 608 barrow cemeteries revealed that no more than seven to eight per cent are 500 m or more from the nearest body of water and the actual percentage may be even lower as ancient water body sites were not taken into consideration.

³ In complexes composed of a hillfort and adjacent settlement(s), the distances were measured from the approximate borders of the latter.



Fig. 4. The setting of Beižionys Hillfort (blue arrow) and Beižionys Barrow Cemetery (red arrows). A 3D terrain model based on LiDAR data. *Created by L. Kurila*.



Fig. 5. The direction of the barrow cemeteries from the nearest hillforts: I – all barrow cemeteries, II – barrow cemeteries located at different distances from the hillforts (graduation steps corresponding to 100 m: from 0–100 to 900–1000 m). *Graph by L. Kurila.*



Fig. 6. Examples of barrow cemetery locations in respect to bodies of water: I – on a lake shore (1 – Taurapilis Barrow Cemetery, 2 – Taurapilis Hillfort), II – near a stream (3 – Leoniškė-Padūdis Barrow Cemetery, 4 – Leoniškė-Padūdis Barrow, 5 – Bajorai-Leoniškė Hillfort), III – on a river terrace at a confluence with a smaller stream (6 – Staviškės Barrow Cemetery site, 7 – Staviškės Hillfort), IV – on a river terrace, separated by an ancient watercourse (8 – Vanagiškis Barrow Cemetery, 9 – Padaigai Hillfort). LiDAR images. *Created by L. Kurila*.

The location of the barrow cemeteries in the landscape in respect to bodies of water appeared to differ from one microregion to another without any evident regularity. They are situated on lake shores (Fig. 6:I, 7:I, IV, 8); at various distances from river and stream banks (Fig. 6:II, 7:II, III); on river terraces at confluences with smaller streams (Fig. 6:III); on elevations further from river terraces; separated from a riverbank by an ancient watercourse, on what was probably an ancient river island, on a rise on river terrace (Fig. 6:IV); etc. In microregions where hillforts and barrow cemeteries are situated along a riverbank, their spatial pattern in respect to the current's direction



Fig. 7. Examples of barrow cemetery and hillfort locations in respect to bodies of water: I – on a single lake (two connected lakes) shore (1 – Perkaliai Barrow Cemetery site, 2 – Perkaliai Hillfort), II – on a single riverbank (3 – Baliuliai Barrow Cemetery, 4 – Baliuliai II Barrow Cemetery, 5 – Baliuliai IV Barrow Cemetery, 6 – Baliuliai Hillfort), III – separated by a stream (7 – Bražuolė Barrow Cemetery, 8 – Bražuolė Hillfort), IV – separated by a lake (9 – approximate site of Čistabora Barrow Cemetery, 10 – Baluoša Hillfort). LiDAR images. *Created by L. Kurila*.

also varies; barrow cemeteries lie both upstream and downstream from hillforts, often in the same microregion (e.g. Fig. 7:II).

As was previously mentioned, a stereotype exists in Lithuanian archaeological literature that water had been perceived in the past as the boundary between this world and the next, leading to an effort to separate the living and burial spaces in the landscape with bodies of water. This stereotype was verified but the spatial distribution of the sites proved to be very irregular. Instances exist of barrow cemeteries and hillforts located on a single lake shore (Fig. 6:I, 7:I, 8) or riverbank (Fig. 7:II) but in some cases, they are actually separated by a river,



Fig. 8. The setting of Tauragnai Hillfort (blue arrow) and Tauragnai Barrow Cemetery (red arrow). A 3D terrain model based on LiDAR data. *Created by L. Kurila*.

stream (Fig. 7:III), or lake (Fig. 7:IV). It appeared that in less than half (47.2 per cent) of the cases, the hillforts and barrow cemeteries were separated by bodies of water (Fig. 9). No relationship was observed between the sites' topography in respect to the bodies of water and the distance between them. Some of the closely located hillforts and barrow cemeteries are separated by water (e.g. Bražuolė and Migonys), while others are not (e.g. Papravalė and Baliuliai) and in some microregions, several barrow cemeteries on both banks of a river lie near a single hillfort (e.g. the three barrow cemeteries around Moša-Naujasodžiai Hillfort). Instances also exist of sites separated not by permanent bodies of water but by ravines formed by temporary meltwater streams (e.g. Buivydai II Hillfort and the three Karmazinai Barrow Cemeteries). Sites located on one riverbank but separated by a small tributary can likewise be mentioned (e.g. Maisiejūnai and Staviškės). Considering the general density of



Fig. 9. Barrow cemetery and hillfort locations in respect to bodies of water: 1 – separated by a lake, 2 – separated by a river or stream, 3 – separated by an ancient water body site, 4 – not separated by a body of water. *Graph by L. Kurila*.

bodies of water in the discussed territory as well as a hillfort's defensive need of having as much of its perimeter protected by water as possible, the inquiry



Fig. 10. Barrow cemeteries and hillforts linked by communicative relationship: I – Papravalė Barrow Cemetery (1) and Hillfort (2), II – Šeškynė Barrow Cemetery (3) and Noselėnai Hillfort (4). LiDAR images. *Created by L. Kurila*.

failed to prove any systematic, deliberate effort to use a body of water as a physical boundary between the worlds of the living and the dead and to thereby express the idea of the afterworld being somewhere beyond the water.

Another important aspect in the spatial distribution of the living and burial sites is their communicative relationship. Reconstructing the path of ancient roads is, of course, rather speculative in the absence of extensive data about the whole of the cultural landscape (the location of all the sites, their chronology, the palaeorelief, the demography, etc.). Aside from contacts via rivers or lakes, which can be more or less apparent, other communication pathways are difficult to reconstruct, especially when the research approaches an inter-microregional or regional level. The attempt to relate barrow cemetery distribution to the ancient roads (Vaitkevičius 2007) is an interesting challenge, but it runs up against a fundamental question as to whether the cemeteries were intentionally established near roads or, vice versa, at distance from them. Within the framework of this study, some instances of manifest communication routes at a microregional level, i.e. at hillfort access locations, are worth mentioning. They are few in number but rather evident. For example, in Papravalė, the only possible roads from the hillfort cross the barrow cemetery (Fig. 10:I) and Noselėnai Hillfort sits on a peninsula with the only access running through or beside Šeškynė Barrow Cemetery (Fig. 10:II), hence the area of the dead was constantly crossed when traveling to or from the hillfort. Another illustrative example is Galminiai Hillfort which has two possible access directions, both of which pass several barrow cemeteries that were probably a continuous barrow range in the past (Fig. 11)⁴. These and some other examples show that the barrows were deliberately located near regular communication routes instead of being hidden in some remote area, which means that a permanent interaction existed between the living and the dead. It can also be stated with little doubt that the region's main water arteries acted as communication routes and visiting the numerous barrow cemeteries scattered

⁴ Although the current surrounding body of water is Antalieptė Pond, which was created in 1959 by flooding the surrounding lakes, earlier cartographic data show that the lake contours and thus the facility of terrestrial communication in the sites' vicinity have not changed since ancient times (Fig. 11:I, II).



Fig. 11. The setting of Galminiai Hillfort (in blue) and Barrow Cemeteries (in red): 1 – Galminiai III Barrow Cemetery, 2 – Galminiai IV Barrow Cemetery, 3 – Galminiai Barrow Cemetery, 4 – Galminiai II Barrow Cemetery, 5 – Galminiai V Barrow Cemetery, 6 – Galminiai VI Barrow Cemetery. I – a 2015 orthophoto, II – a 1932 Polish military topographic map (M 1:100 000), III – a 3D terrain model based on LiDAR data. *Created by L. Kurila*.

alongside them (e.g. those located on the banks of the Neris and Žeimena) was routine for travellers.

The last criterion used in the study of the reconstruction of the spatial relationships of the hillforts and barrow cemeteries is the visual contact between them. The LiDAR data suggest that such contact existed in at least 73 per cent of the instances (Fig. 12), but for some of the destroyed barrow cemeteries with no precise locations and territories, this remains ambiguous. In several cases, the absence of visual contact can be



Fig. 12. The visibility of the barrow cemeteries from the hillforts: 1 – visible, 2 – no visual contact, 3 – uncertain. *Graph by L. Kurila*.



Fig. 13. The visibility of the barrow cemeteries from the hillforts: 1 – Paalkiai Hillfort, 2 – Grabijolai, Žemaitiškiai II Barrow Cemetery, 3 – Grabijolai Barrow Cemetery site, 4 – Grabijolai, Žemaitiškiai Unenclosed Settlement, 5 – unregistered unenclosed settlements (after: Vėlius 2011, pp.89–91, pav. 4; 2012, pav. 8), 6 – Kuktiškės Hillfort, 7 – Kuktiškės Barrow Cemetery, 8 – Pašulniškės Hillfort, 9 – Skersabaliai Barrow Cemetery, 10 – Skersabaliai II Barrow Cemetery, 11 – Papunžė Barrow Cemetery site, 12 – Moša, Naujasodžiai Hillfort, 13 – Moša, Naujasodžiai Barrow Cemetery, 14 – Moša, Skrebis Barrow Cemetery, 15 – Naujasodžiai Barrow Cemetery (observer points in blue, viewshed zones in white). 2009–2010 orthophotos. *Created by L. Kurila*.

explained by the chronological distance between the hillforts and barrow cemeteries (e.g. Paželviai, Jonauka, Sližiškiai, and Einoronys Hillforts). These were not included in the database. The mutual visibility between the sites was diverse, depending on the distance and landscape. In some cases, one could observe open barrow cemetery areas and even individual barrows from the hillforts, e.g. at Beižionys (Fig. 4), Moša-Naujasodžiai (Fig. 13:IV), Migonys (Fig. 14), etc., while elsewhere, only fields or forested areas had probably been visible where the barrows lie (Fig. 8, 13:I–III). Although this cannot be measured statistically, the importance of visual contact is rather evident. Some hillforts have a very limited visual range and the barrows are concentrated



Fig. 14. The setting of Migonys Hillfort (in blue) and Migonys Barrow Cemetery (in red): I – a LiDAR image, II – a 2015 orthophoto showing the viewshed zone (in white) from the hillfort (observer point in blue), III – a 3D terrain model based on LiDAR data, IV – view from the hillfort looking towards the barrow cemetery. *Created and photographed by L. Kurila*.

in precisely those zones (Fig. 13:IV). A good example, although chronologically debatable⁵, is Buivydai II Hillfort, which is a rise with a narrow view of the Neris river terrace, where the three Karmazinai Barrow Cemeteries lie (Fig. 15). Instances also exist where the visibility from hillforts is very wide and the barrows are scattered in every direction, e.g. at Mūrininkai where more than ten barrow cemeteries and isolated barrows lie in zones visible from the hillfort (Fig. 16). It can thus be argued that visual range influenced burial site selection. Some barrow cemeteries, however, are located at a distance from those areas visible from the hillforts, e.g. at Pavydžiai-Parija (Fig. 17). In order to try to assess any probable chronological changes, the barrow cemeteries were grouped into three chronological stages: the Roman period (c. $3-4^{th}$ century), the Migration period (c. $5-8^{th}$ century), and the Viking Age (c. $9-11/12^{th}$ century). However, this was possible for only 30 (27.8 per cent of the) excavated sites. It must also be noted that very few of them have been completely investigated and the others may still contain unexcavated barrows from other periods. The sample of 30 barrow cemeteries did not show any chronological regularity in distance, direction, or visual contact in respect to the hillforts, but a probable tendency was spotted: the number of barrow cemeteries isolated from hillforts by bodies

⁵ The hillfort has not yet been excavated. Judging from its shape and from stray pottery finds (Dr Gintautas Vėlius, personal communication), it should probably be dated to no later than the Roman period, i.e. the likely earliest stage of the Karmazinai Barrow Cemeteries.





Fig. 15. The setting of Buivydai II Hillfort (in blue), Karmazinai Barrow Cemeteries (in red), and unregistered unenclosed settlements (in green; after: Vėlius 2010, pp.78–80, pav. 1; 2012, pav. 2): 1 – Karmazinai Barrow Cemetery, 2 – Karmazinai II Barrow Cemetery, 3 – Karmazinai III Barrow Cemetery. I – a LiDAR image, II – a 2012–2013 orthophoto showing the viewshed zone (in white) from the hillfort (observer point in blue), III – a 3D terrain model based on LiDAR data. *Created by L. Kurila.*

of water declined during the aforementioned three periods, 60.0, 47.4, and 27.3 per cent, respectively, having been recorded. This inference is not statistically significant (the confidence level is <80 per cent). It can thus be argued only hypothetically that the idea of water as the boundary between the living and the dead, which was significant in the early stage of the East Lithuanian barrow culture, was later gradually abandoned.

The study's clearest shortcoming is the exclusion of the unenclosed settlements from the database. As has been previously mentioned, very few of them are known and they have not been investigated well enough for a comprehensive reconstruction of the cultural landscape to be made. Most of them have not been dated precisely enough and may be palimpsests from longterm use. Moreover, their spatial distribution (their areas or the boundaries between them) is vague. This leaves one with very limited possibilities for discussing the spatial relationship between the settlements and the barrow cemeteries from the perspectives of this study: their location in respect to bodies of water, communication routes, and visual contact. Owing to the aforementioned challenges, the inclusion of unenclosed settlements in the spatial analysis is much more difficult than that of hillforts which cannot change their location, expand, or diminish, i.e. they are spatially stable. Any discussion at the microregional level is doomed to speculation at this stage of the research as the discovery of new settlements could modify the model of the sites' spatial distribution. Only in certain instances where a settlement and barrow cemetery are in very close proximity can their spatial relationship be approached with confidence. These are mainly settlements adjacent to a hillfort, but they have added nothing of significance to the study in respect to the employed perspectives.

The barrow cemeteries can be either separated or unseparated from the adjacent or unenclosed settlements by bodies of water, just like with the hillforts. In some microregions, e.g. in Grabijolai



Fig. 16. The setting of Mūrininkai Hillfort (in blue) and the neighbouring barrow cemeteries (in red): 1 – Mūrininkai Barrow Cemetery, 2 – Mūrininkai II Barrow Cemetery, 3 – Mūrininkai III Barrow Cemetery, 4 – Mūrininkai IV Barrow Cemetery, 5 – Mūrininkai V Barrow Cemetery, 6 – Mūrininkai VI Barrow Cemetery, 7 – Mūrininkai Barrow, 8 – Mūrininkai II Barrow, 9 – Mūrininkai III Barrow, 10 – Akmenė-Mūrininkai Barrow Cemetery, 11 – Akmenė Barrow Cemetery, 12, 13 – newly discovered barrows. I – a LiDAR image, II – a 2012–2013 orthophoto showing the viewshed zone (in white) from the hillfort (observer point in blue), III – a 3D terrain model based on LiDAR data, IV – the hillfort as seen from the SE (from the side of the SE barrow range). *Created and photographed by L. Kurila.*



Fig. 17. The viewshed zone (in white, the observer point in blue) from Pavydžiai-Parija Hillfort (in blue) and Pavydžiai-Parija Barrow Cemetery (in red). A LiDAR image. *Created by L. Kurila*.

microregion (Fig. 13:I), water separates the hillforts from unenclosed settlements and barrow cemeteries, while in others, e.g. in Karmazinai (Fig. 15), all the sites are on one riverbank. In Baliuliai, the settlement adjacent to the hillfort is located in a Mera river bend (see Fig. 7:II, the S part of the hillfort's territory), being thereby isolated from Baliuliai IV Barrow Cemetery which has fairly direct access to the hillfort. In cases of the close proximity of the sites, there are instances of a hillfort being situated between the settlement and the barrow cemetery (e.g. Beižionys), the settlement between the hillfort and the barrow cemetery (e.g. Taurapilis, Fig. 6:I, the E part of the hillfort's territory), and sometimes both in complexes that include a hillfort and several barrow cemeteries (e.g. Moša-Naujasodžiai, Fig. 13:IV, the S part of the hillfort's territory). This, however, is rather indefinite as many hillforts are surrounded by settlements on several sides (e.g. at Maisiejūnai and Migonys) and the location of the buildings could have been subject to constant change. There are also considerable examples of barrow cemeteries located in earlier settlement areas. This phenomenon still requires assessment from the perspectives of population change and ancestral cults as its ideological reflection.

The current stage of unenclosed settlement research allows for only very preliminary insights. After filtering the data from the RCP and PROLIGIS, only about 30 instances of barrow cemeteries and Iron Age unenclosed settlements that are at a distance of 1 km or closer were registered. However, comprehensive surveys of some microregions, e.g. those on the banks of the River Neris (Vėlius 2010; 2011; 2012; Vengalis 2014), show that many areas could have been settled much more densely than it would appear from the current heritage protection situation⁶. There is a rather high probability of unenclosed settlements being located in the vicinity of most of the barrow cemeteries. Without going deeper into the question of either their spatial relationship or the isolation of barrow cemeteries in respect to unenclosed settlements, it can be noted that instances of these sites being located close to one other and within reach of everyday communicative and visual contact are not uncommon (Fig. 13:I, 18). Some barrow cemeteries are located on higher river terraces very close to settlements (Fig. 13:I, 15, 18:2). Nevertheless, without a solid body of empirical data and a sufficiently precise chronology, it is still impossible to offer a thorough analysis of the settlement-tobarrow cemetery spatial relationship.

⁶ Several new unenclosed settlements became legally protected before this paper was published.





Fig. 18. The setting of some barrow cemeteries (in red) and unenclosed settlements (in green): 1 – Nemaitonys-Žydiškės Barrow and the approximate site of a destroyed barrow cemetery, 2 – Žydiškės Unenclosed Settlement, 3 – Ardiškis Barrow Cemetery, 4 – Ardiškis II Barrow Cemetery, 5 – Dailidžiai-Ardiškis II Barrow Cemetery, 6 – Valiukiškiai Barrow Cemetery, 7–9 – suppositional sites of Ardiškis III–V Barrow Cemeteries (PROLIGIS data), 10 – Ardiškis Unenclosed Settlement, 11 – an unregistered unenclosed settlement (after: Vengalis 2014, pp.114–115, pav. 9); III – the setting of Jakšiškis and Knitiškiai Barrow Cemeteries (in red) and Jakšiškis Unenclosed Settlement (in green). I, II – 2012–2013 orthophotos, III – a 3D terrain model based on LiDAR data. *Created by L. Kurila*.

DISCUSSION

The dead never vanish without a trace. The very existence of a burial ritual witnesses to the aspiration of the living to maintain their connections with the dead, which can be expressed through passive memory, active communication, or even both at the same time. Public burials and commemorative rituals also serve as an instrument to construct the community's social order and identities (Oestigaard, Goldhahn 2006). The isolation of the worlds of the living and the dead, on both a spiritual and a material level, is nearly universal, but the range of its material expression is broad. On the other hand, the same can be also said about the willingness and means to reduce this isolation. There are very few examples of a burial ritual that leaves no material traces linked with a specific location (e.g. the scattering of cremains in the sea or giving the dead body to wild animals). The selection of an area for burial is always an outcome of a body disposal strategy, but it is never limited to just that. The different models for the spatial setting of the living and burial zones, from residential (e.g. Adams, King 2011; Sofield 2015) to remote, isolated burials, reflect different perceptions of the interaction with the dead and they are unlikely to ever be a random choice.

The physical location of a burial area in the landscape is only one of many means for a community to express its attitudes towards the dead, but it is one of the few which can be assessed by today's archaeologists without a high degree of speculation (see e.g. Parker Pearson 1993; Williams 2002; van Beek, Louwen 2012; Gebauer 2015; von Hackwitz, Lindholm 2015). The set of spatial perspectives applied in this paper as a criterion, if evaluated on a general level, is probably neither the best clue for the topic of the relationship between the living and the dead, nor universal, but it was expected to best fit this specific period, the region, and the available data. A different archaeological setting, e.g. distinctly hierarchic settlement or burial patterns, a greater diversity of sites, or a different natural landscape, e.g. plain, highland, or maritime, etc., would require a different approach. It needs to be stressed that the applied criterion is an uneven combination of the mathematical processing of spatial data (distances or directions) and a contextual interpretation (the location in respect to bodies of water, communication routes, or visibility). The experience of archaeologists in researching different perspectives also varies in both Lithuania and elsewhere. The distances,

directions, and situation of the sites in respect to water have long been investigated in a great variety of ways and have advanced discussions on many topics. Studies of ancient communication routes seldom move beyond site mapping, whereas visibility analysis, although subject to debate, has become widely applied in recent decades owing to the rise of phenomenological approaches to past landscapes (Wheatley, Gillings 2002, pp.180-186; Cummings, Whittle 2003; Llobera 2007). Visibility analysis gained strength with the development of GIS technologies, although case studies apply rather different methodological forms (e.g. Lopez-Romero, de la Aleja 2008; Rennell 2012; Wright et al. 2014). It must thus be admitted that, in the absence of a solid theoretical and methodological pattern, the discussion presented here can offer only limited possibilities to answer the addressed questions. In the present study, the true picture of the past social and ideological reality is also masked by issues raised by the incompleteness of the archaeological record and its often ambiguous interpretation.

With the help of the discussed indicators for the hillfort-to-barrow cemetery spatial relationship, one can put forward some insights into the general attitudes of the Iron Age East Lithuanian communities towards their dead. In this area and period, no effort is observed to set any physical boundaries between the areas of the living and the dead. The landscapes surrounding the hillforts, including both their natural and cultural elements, were an arena of the communities' contacts with their dead. It can thus be argued that the aforementioned stereotype of the dead being separated from the living suffers from a lack of evidence and has to be reconsidered.

The spatial analysis failed to reveal any universal and invariable site distribution patterns, which would attest to their spatial connections, e.g. their being in all cases located on a single riverbank or lake shore, same altitude, etc. Nevertheless, the general absence of physically demarcating landscape elements and the presence of landscape features joining the sites into solid visual and communicative spaces point in many cases to the communities' willingness to create and maintain a mutual relationship with the dead. What worldviews and ideological objectives lie beyond this is a challenging question. On the one hand, close spatial contacts with the departed ancestors could have been used as ideological assistance in maintaining the established social order, system of identities, authority, power, or rights to territories. On the other, living in close proximity with the dead could have been more a standard rooted in the norms of ethics and social memory. In any case, this need not have been a deeply realized and consciously embodied physical image of social and ideological realia, but could have been simply a consequence of subconscious human behaviour. However, the interpretation of the spatial links between the domestic/social and burial areas as a representation of an ancestor cult should be taken cautiously. The dead do not become ancestors at the moment of their death or burial - they are still dead parents, spouses, siblings, offspring, or community members and it is instead a combination of emotions and practicality that determines the place and manner of their burial. Only with the passage of time and changing generations do the emotional ties vanish and ancestral memories form. Therefore communicative, visual, and other spatial links between living sites and cemeteries could have been important for ancestral traditions, but these contacts were not purposely created for this end.

The location of the burial areas in the landscape in respect to the living areas was determined not only by ideology but also by utilitarian needs for space. Any territory occupied by burials could no longer be used for agriculture or settlement expansion, at least as long as the memory of the ancestors survived. It also became unavailable for any economic activities. It is difficult to judge the priorities of the discussed communities, but it is highly probable that the nearest and best accessed (i.e. unseparated by water or any other natural barriers) areas were usually reserved for economic needs, thus restricting the selection of locations for burials. This may serve as an explanation for the rather evident isolation of the burial and living zones in some cases. Nevertheless, the aforementioned examples of contiguous or very closely situated barrow cemeteries and hillforts attest to the strong aspiration of some communities to bury their dead in areas with the best access, despite other needs existing for them.

It has to be admitted that a study constructed on a filtered and possibly biased body of data cannot offer firm conclusions; rather it can only provide clues for future research. Moreover, there is a wide gap between measuring the landscape's physical attributes and a comprehension of people's roles and motives in creating this landscape. Therefore the conclusions proposed in this paper are only preliminary. The testing of more spatial approaches in other regions and landscapes and at other types of sites can contribute to a deeper knowledge of the culture of Iron Age Balt societies and their attitudes towards their dead.

CONCLUSIONS

The location of the Iron Age East Lithuanian hillforts and barrow cemeteries in the natural landscape is not accidental and these two site types are spatially linked. However, not all of the assessed spatial perspectives yielded similarly significant results. No significant regularities can be observed in the distances between the two site types. Astronomic factors did not play an important role in choosing a cemetery's location. While important in burial customs, astronomic azimuths were expressed at the individual, i.e. body orientation, level, instead of a mass level, i.e. that of the whole cemetery. Burial areas have a distinct spatial relationship to bodies of water, although no single, clearly defined model of this relationship was observed. Water was perceived as a part of the world of the dead, but not as the boundary between this world and the next. The barrow cemeteries were not intended to be hidden from communication routes; daily life

range of the hillforts instead of being hidden. Spatial links between the barrow cemeteries and hillforts, which latter were not only residential locations but also social centres, attests to the aspiration of the studied communities to create, maintain, and emphasize their relationship with their dead. The living and the dead were perceived as constantly communicating and sharing one landscape, without any effort to set boundaries, either natural or spiritual, between their spaces.

The barrow cemeteries were located mostly in visual

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ABBREVIATIONS

ATL – Archeologiniai tyrinėjimai Lietuvoje

CAJ – Cambridge Archaeological Journal

LA – Lietuvos archeologija

LAA – Lietuvos TSR archeologijos atlasas

RCP – Register of Cultural Property of the Department of Cultural Heritage under the Ministry of Culture

RYŠYS AR ATSKIRTIS? GYVŲJŲ IR MIRUSIŲJŲ ERDVĖS GELEŽIES AMŽIAUS RYTŲ LIETUVOJE

Laurynas Kurila

Santrauka

Gyvųjų ir mirusiųjų pasaulių santykio suvokimas yra vienas esminių žmogaus kultūros elementų, o gyvenamųjų ir laidojimo erdvių fizinė padėtis kraštovaizdyje yra universali materiali jo išraiška. Lietuvos geležies amžiaus archeologijoje ilgą laiką vyravo laidojimo paminklų tyrimai, kuriuose nemažai dėmesio skirta jų atspindimai dvasinei kultūrai, bet į gyvenamąsias ir laidojimo vietas žvelgiama daugiau kaip į izoliuotas paminklų grupes, nei integralų, bendruomenės ryšį su mirusiaisiais atskleidžiantį kultūrinį kraštovaizdį. Šiuo požiūriu mažai tenutolta nuo kai kurių gilesne analize nepagrįstų stereotipų, pvz., teiginio, kad vandens telkiniai buvo sakrali riba tarp gyvųjų ir mirusiųjų pasaulių.

Šiame straipsnyje analizuojami erdviniai ryšiai tarp gyvenamųjų ir laidojimo vietų Romėniškojo–Vikingų laikotarpių (III/IV–XI/XII a.) Rytų Lietuvoje, remiantis hipoteze, kad fizinis paminklų išsidėstymas ir jų ryšiai kraštovaizdyje atspindi vietos bendruomenių gyvųjų ir mirusiųjų pasaulių santykio suvokimą. Turint nepakankamai duomenų apie šio laikotarpio neįtvirtintas gyvenvietes, apsiribojama piliakalnių, kurie buvo ne tik gyvenamosios vietos, bet ir ekonominiai, galios bei kulto centrai, ir pilkapynų erdvine analize. Tyrimas paremtas penkiomis erdvinėmis perspektyvomis: atstumu tarp gyvųjų ir mirusiųjų erdvių; jų išsidėstymo kryptimi; išsidėstymu vandens telkinių atžvilgiu; komunikaciniais ryšiais; vizualiu ryšiu tarp paminklų.

Tirtas 16 125,5 km² plotas – į Lietuvos Respubliką patenkanti Rytų Lietuvos pilkapių kultūros teritorijos dalis. Remiantis įvairiais duomenimis, joje užregistruoti 326 piliakalniai ir 608 pilkapynai, pavieniai pilkapiai ar sunaikintų pilkapynų vietos. Apibrėžti visų piliakalnių 1000 m buferiai, darbe sąlyginai laikomi mikroregionais. Toliau aptariami piliakalniai su į jų buferius patenkančiais pilkapynais. Manytina, kad pilkapynų nebuvimas netoli piliakalnių (ir piliakalnių ar gyvenviečių – netoli pilkapynų) daugeliu atvejų yra suardymų ar nepakankamų žinių apie paminklus pasekmė. Be to, 1000 m laikoma sąlygine riba, iki kurios pasirinktos metodinės priemonės dar veiksmingos. Erdvinė analizė atlikta remiantis LiDAR duomenimis ir kita kartografine medžiaga, matomumas įvertintas ArcGIS 10.1 3D Analyst *Viewshed* ir *Line Of Sight* įrankiais. Sudaryti kai kurių mikroregionų reljefo 3D modeliai.

Erdvinė analizė atskleidė, kad pilkapynų tankumas piliakalnių 1000 m buferiuose yra daug didesnis, nei už jų ribų (atitinkamai 0,087 ir 0,034 pilkapyno / 1 km²). Pilkapynai išsidėstę įvairiu atstumu iki piliakalnių, šiuo požiūriu dėsningumų nepastebėta, nors mažėjant atstumui jų tankumas tolydžio didėja. Neįžvelgta ir jokių pilkapynų krypties nuo piliakalnių tendencijų. Taigi jei astronominiai (Saulės tekėjimo, laidos ar kt.) azimutai turėjo kokią nors reikšmę laidojimo papročiams, jų nesistengta išreikšti gyvenamosios ir laidojimo vietos erdviniu santykiu.

Pilkapynų erdvinis ryšys su vandens telkiniais yra labai ryškus – beveik visi jie yra arčiau nei 500 m iki vandens, bet patys pilkapynai išsidėstę labai įvairai: upių, upelių krantuose (tiek aukščiau, tiek žemiau piliakalnių), terasose, santakose, senvagių salelėse, ežerų krantuose ir t.t. Įvertinus minėtą vandens kaip magiškos ribos tarp gyvųjų ir mirusiųjų pasaulių stereotipą nustatyta, kad tik 47,2% atvejų pilkapynus nuo piliakalnių skyrė upės, ežerai ar senieji vandens telkiniai. Turint omenyje bendrą vandens telkinių skaičių piliakalnių aplinkoje, manytina, kad sistemingai nesiekta vandeniu atskirti gyvenamąsias ir laidojimo vietas (statistiškai nepatikimai tai būtų galima įžvelgti nebent Romėniškuoju laikotarpiu). Taigi vanduo buvo suvokiamas kaip mirusiųjų pasaulio dalis, bet ne kaip jo riba.

Identifikuoti komunikacinius ryšius tarp paminklų yra sunku, bet keliais atvejais į/iš piliakalnio akivaizdžiai buvo nuolat vykstama per/pro pilkapius. Tas pat pasakytina ir apie daugelį palei upes, kuriomis ir šalia kurių driekėsi susisiekimo linijos, išsidėsčiusių pilkapynų. Nenorėta mirusiųjų pasaulio izoliuoti, jis visuomet buvo netoli kasdienės veiklos.

Vizualus kontaktas tarp piliakalnių ir pilkapynų egzistuoja mažiausiai 73% atvejų (atmetant dabartinės augmenijos faktorių). Laidojimui buvo sąmoningai pasirenkamos gerai matomos vietos. Kai kuriais atvejais pilkapynų išsidėstymas greta piliakalnių, nuo kurių apžvalgos laukas – platus, aiškiai skiriasi nuo tų atvejų, kai matomumas nuo piliakalnio ribotas.

Deja, apie senovės gyvenviečių ir pilkapynų erdvinius ryšius, turimais duomenimis, galima pateikti tik preliminarias įžvalgas (daugiausia remiantis piliakalnių papėdžių gyvenvietėmis). Esama įvairių piliakalnio, papėdės gyvenvietės ir pilkapyno išsidėstymo modelių, dažnu atveju gyvenvietėse sodybų vietos greičiausiai nuolat keitėsi. Keli aptariami pavyzdžiai rodo, kad neįtvirtintų gyvenviečių būta tiek atskirtų nuo pilkapynų vandens telkinių, tiek tuose pačiuose jų krantuose. Kai kurios senovės gyvenvietės yra artimoje, komunikaciniais ryšiais ir vizualiai su pilkapynais susijusioje erdvėje. Tikėtina, kad ateityje jų gali būti aptikta daugumos pilkapynų aplinkoje.

Aptarta medžiaga leidžia teigti, kad geležies amžiaus Rytų Lietuvoje nesistengta fiziškai atriboti gyvųjų ir mirusiųjų erdvių, veikiau atvirkščiai – siekta išlaikyti tarp jų ryšį. Tiesa, universalaus ir aiškiai apibrėžto tokių sąsajų modelio nebūta. Piliakalnius supantis kraštovaizdis buvo gyvųjų ir mirusiųjų ryšių kūrimo ir išlaikymo arena. Dvasiniai ryšiai buvo išreiškiami fiziniu laidojimo vietų išdėstymu. Viena vertus, glaudus erdvinis ryšys su protėviais galėjo būti ideologinė socialinių santykių, identiteto, autoriteto, galios ar teisių į teritoriją išraiškos priemonė, kita vertus (labiau tikėtina), šio ryšio siekį galėjo lemti etikos normos ir socialinė atmintis ir tik ilgainiui formuodavosi protėvių kulto tradicija. Žinoma, erdvės laidojimo vietoms pasirinkimą ribojo ir utilitariniai poreikiai – arčiausiai esančios, lengvai pasiekiamos vietos buvo reikalingos žemės ūkiui, gyvenviečių plėtrai ar kitoms praktinėms reikmėms.

LENTELĖ

1 lentelė. Tyrimo duomenų bazė, pilkapynų tankumo parametrai

ILIUSTRACIJŲ SĄRAŠAS

1 pav. Tyrime nagrinėjami paminklai: 1 – į piliakalnių 1000 m buferius patenkantys pilkapynai, 2 – kiti pilkapynai, 3 – piliakalniai, 4 – piliakalnių 1000 m buferiai, 5 – Rytų Lietuvos pilkapių kultūros teritorija Lietuvos ribose, 6 – Rytų Lietuvos pilkapių kultūros teritorija Baltarusijos ribose, 7 – Lietuvos Respublikos valstybinė siena. *L. Kurilos brėž.*

2 pav. Pilkapynų atstumas iki piliakalnių. *L. Kurilos brėž.*

3 pav. Pilkapynų tankumas įvairių atstumų iki piliakalnių (vidutiniškai pilkapynų nagrinėjamų piliakalnių 1000 m buferiuose). *L. Kurilos brėž.*

4 pav. Beižionių piliakalnio (mėlyna spalva) ir Beižionių pilkapyno (raudona spalva) aplinka. LiDAR duomenimis sudarytas vietovės 3D modelis. *L. Kurilos brėž.*

5 pav. Pilkapynų išsidėstymo iki artimiausių piliakalnių kryptys: I – visų pilkapynų kryptys, II – įvairiu atstumu iki piliakalnių esančių pilkapynų kryptys (padalos atitinka 100 m intervalą: nuo 0–100 iki 900–1000 m). *L. Kurilos brėž.*

6 pav. Pilkapynų padėties vandens telkinių atžvilgiu pavyzdžiai: I – ežero krante (1 – Taurapilio pilkapynas, 2 – Taurapilio piliakalnis), II – netoli upelio (3 – Leoniškės, Padūdžio pilkapynas, 4 – Leoniškės, Padūdžio pilkapis, 5 – Bajorų, Leoniškės piliakalnis), III – upės terasoje, netoli intako (6 – Staviškių pilkapių vieta, 7 – Staviškių piliakalnis), IV – upės terasoje, atskirtas senvagės (8 – Vanagiškio pilkapynas, 9 – Padaigų piliakalnis). LiDAR vaizdas. *L. Kurilos brėž.*

7 pav. Pilkapynų ir piliakalnių padėties vandens telkinių atžvilgiu pavyzdžiai: I – viename ežero (protaka sujungtų ežerų) krante (1 – Perkalių pilkapių vieta, 2 – Perkalių piliakalnis), II – viename upės krante (3 – Baliulių pilkapynas, 4 – Baliulių pilkapynas II, 5 – Baliulių pilkapynas IV, 6 – Baliulių piliakalnis), III – atskirti upelio (7 – Bražuolės pilkapynas, 8 – Bražuolės piliakalnis), IV – atskirti ežero (9 – apytikslė Čistaboros pilkapių vieta, 10 – Baluošos piliakalnis). LiDAR vaizdas. *L. Kurilos brėž.*

8 pav. Tauragnų piliakalnio (mėlyna spalva) ir Tauragnų pilkapyno (raudona spalva) aplinka. LiDAR duomenimis sudarytas vietovės 3D modelis. *L. Kurilos brėž.*

9 pav. Pilkapynų ir piliakalnių padėtis vandens telkinių atžvilgiu: 1 – atskirti ežero, 2 – atskirti upės arba upelio, 3 – atskirti senojo vandens telkinio vietos, 4 – neatskirti vandens telkinio. *L. Kurilos brėž.*

10 pav. Komunikaciniais ryšiais susiję pilkapynai ir piliakalniai: I – Papravalės pilkapynas (1) ir piliakalnis (2), II – Šeškynės pilkapynas (3) ir Noselėnų piliakalnis (4). LiDAR vaizdas. *L. Kurilos brėž.*

11 pav. Galminių piliakalnio (mėlyna spalva) ir pilkapynų (raudona spalva) aplinka: 1 – Galminių pilkapynas III, 2 – Galminių pilkapynas IV, 3 – Galminių pilkapynas, 4 – Galminių pilkapynas II, 5 – Galminių pilkapynas V, 6 – Galminių pilkapynas VI. I – 2015 m. ortofotografija, II – 1932 m. lenkiškas karinis topografinis žemėlapis (M 1:100 000), III – LiDAR duomenimis sudarytas vietovės 3D modelis. *L. Kurilos brėž.*

12 pav. Pilkapynų matomumas nuo piliakalnių: 1 – matomas, 2 – nematomas, 3 – neaišku. *L. Kurilos brėž.*

13 pav. Pilkapynų matomumas nuo piliakalnių: 1 – Paalkių piliakalnis, 2 – Grabijolų, Žemaitiškių pilkapynas II, 3 – Grabijolų pilkapyno vieta, 4 – Grabijolų, Žemaitiškių senovės gyvenvietė, 5 – neregistruotos senovės gyvenvietės (pagal: Vėlius 2011, p.89–91, pav. 4; 2012, pav. 8), 6 – Kuktiškių piliakalnis, 7 – Kuktiškių pilkapynas, 8 – Pašulniškių piliakalnis, 9 – Skersabalių pilkapynas, 10 – Skersabalių pilkapynas II, 11 – Papunžės pilkapių vieta, 12 – Mošos, Naujasodžių piliakalnis, 13 – Mošos, Naujasodžių pilkapynas, 14 – Mošos, Skrebio pilkapynas, 15 – Naujasodžių pilkapynas (mėlyna spalva – stebėjimo taškai, balta – matomos zonos). 2009–2010 m. ortofotografijos. *L. Kurilos brėž.*

14 pav. Migonių piliakalnio (mėlyna spalva) ir Migonių pilkapyno (raudona spalva) aplinka: I – LiDAR vaizdas, II – 2015 m. ortofotografija ir iš piliakalnio (mėlyna spalva – stebėjimo taškas) matomos zonos (balta spalva), III – LiDAR duomenimis sudarytas vietovės 3D modelis, IV – pilkapyno vietos vaizdas nuo piliakalnio. *L. Kurilos brėž. ir nuotr.*

15 pav. Buivydų piliakalnio II (mėlyna spalva), Karmazinų pilkapynų (raudona spalva) ir neregistruotų senovės gyvenviečių (žalia spalva; pagal: Vėlius 2010, p.78–80, pav. 1; 2012, pav. 2) aplinka: 1 – Karmazinų pilkapynas, 2 – Karmazinų pilkapynas II, 3 – Karmazinų pilkapynas III. I – LiDAR vaizdas, II – 2012–2013 m. ortofotografija ir iš piliakalnio (mėlyna spalva – stebėjimo taškas) matomos zonos (balta spalva), III – LiDAR duomenimis sudarytas vietovės 3D modelis. *L. Kurilos brėž.*

16 pav. Mūrininkų piliakalnio (mėlyna spalva) ir gretimų pilkapynų (raudona spalva) aplinka: 1 – Mūrininkų pilkapynas, 2 – Mūrininkų pilkapynas II, 3 – Mūrininkų pilkapynas III, 4 – Mūrininkų pilkapynas IV, 5 – Mūrininkų pilkapynas V, 6 – Mūrininkų pilkapynas VI, 7 – Mūrininkų pilkapis, 8 – Mūrininkų pilkapis II, 9 – Mūrininkų pilkapis III, 10 – Akmenės, Mūrininkų pilkapynas, 11 – Akmenės pilkapynas, 12, 13 – neregistruoti naujai rasti pilkapiai. I – LiDAR vaizdas, II – 2012–2013 m. ortofotografija ir iš piliakalnio (mėlyna spalva – stebėjimo taškas) matomos zonos (balta spalva), III – LiDAR duomenimis sudarytas vietovės 3D modelis, IV – piliakalnis iš PR, nuo PR pilkapių masyvo pusės. L. Kurilos brėž. ir nuotr. 17 pav. Iš Pavydžių, Parijos piliakalnio (mėlyna spalva) matomos zonos (balta, mėlyna spalva – stebėjimo taškas) ir Pavydžių, Parijos pilkapynas (raudona spalva). LiDAR vaizdas. *L. Kurilos brėž*.

18 pav. Pilkapynų (raudona spalva) ir senovės gyvenviečių (žalia spalva) aplinka: 1 – Nemaitonių, Žydiškių pilkapis ir apytikslė sunaikinto pilkapyno vieta, 2 – Žydiškių senovės gyvenvietė, 3 – Ardiškio pilkapynas, 4 – Ardiškio pilkapynas II, 5 – Dailidžių, Ardiškio pilkapynas II, 6 – Valiukiškių pilkapynas, 7–9 – menamos Ardiškio pilkapynų III–V vietos (PROLIGIS duomenys), 10 – Ardiškio senovės gyvenvietė, 11 – neregistruota senovės gyvenvietė (pagal: Vengalis 2014, p.114–115, pav. 9); III – Jakšiškio ir Knitiškių pilkapynų (raudona spalva) bei Jakšiškio senovės gyvenvietės (žalia spalva) aplinka. I, II – 2012–2013 m. ortofotografijos, III – LiDAR duomenimis sudarytas vietovės 3D modelis. *L. Kurilos brėž.*

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