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EVIDENCE OF SOCIAL STRUCTURE OF A NEOLITHIC COMMUNITY IN SVODÍN, SOUTHWEST SLOVAKIA

ABSTRACT: The period after initial development of Neolithic society in Central Europe, known as the Post-LBK era, is marked by an influx of new cultural stimuli from the South and the emergence of formalization in monumental architecture, resulting in a cultural diversification while maintaining significant common traits across different regions. An important part of understanding the process of this change is understanding the development of social complexity during the transition. This study addresses this question by examining variations in burial rite coinciding with the age or sex of the deceased or the spatial distribution of 106 graves from the Lengyel Culture settlement in Svodín, dated around 4800 cal BC. The concept of exceptionality rather than richness of burials is introduced. It is based on the composition and spatial distribution of inventories within graves and contrary to the traditional deductive approach does not depend on prior selection of attributes of prestige. Principal Component Analysis is used to assess exceptionality based on ceramic shapes, decoration and non-ceramic grave goods. Resampling tests using a Monte Carlo algorithm are employed to assess the significance of connection of specific attributes with exceptional burials and age, sex or spatial groups. This approach enables us to study social differences in regions and time periods where prestigious materials such as metal are not yet present. New conclusions are drawn about social stratification in the Post-LBK era and confronted with results of existing studies dealing with status and prestige. The image of a vertically differentiated society with middle aged men assuming the highest rank in the community emerges, showing complex social relations both between and within different kinships on the settlement. Observations of diachronic development of social differences indicate a gradually evolving society, foreshadowing the emergence of elites in the following Aeneolithic period.

KEY WORDS: Central Europe – Neolithic – Post-Lbk – Social structure – Burial rite

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INTRODUCTION

After the initial spread of farming communities throughout Central Europe during the late sixth and early fifth millennium cal BC, characterized in the archaeological record by the presence of linear-decorated pottery (Linear Pottery Culture – LBK), starts a period of technological and architectural innovations, referred to as Post-LBK development. While retaining much of the characteristics of their predecessors, settlements emerging over the next 300 years show an increasing degree of social organization, manifesting in the presence of more elaborate building constructions, greater quantity and variability of grave goods and most notably monumental circular enclosures, which show a significant degree of standardization throughout the areas of extent of different cultural groups (Pavúk 2009, Melichar, Neubauer 2010, Řídký 2011).

While some aspects of material culture, mainly the ceramic shapes, show continuity both from the preceding and into the subsequent period, others seem to be relatively short-lived and raise questions about social change induced by outside influences. To understand the nature of this change, we need to find a proxy which will allow us to examine a past society using its material remains in the archaeological record.

The cultural expression of the Neolithic society in the material form happens through abstract symbols. From geometric patterns on pottery and sculptures, to the emergence of monumental architecture with a strong symbolic dimension. In the absence of any direct evidence about the social and ritual structures, which were represented by these artefacts, we must rely on the comparative method. Conclusions about the meaning of observed archaeological structures in the sense of Neustupný (1993: 113) must be inferred from their correlation with physical, biological or economic structures, which we can reliably deduce based on direct observation.

Our basic assumption is that some degree of social segmentation is present in every human society. Various social classes, as defined by Linton (1936), are rooted in the cultural tradition and closely connected with the roles, held by members of the community. Specific social status can be connected to gender, age, skills, but also to membership in a family or clan. Especially the presence of hereditary status can lead to vertical stratification of a society.

The social status of a person can be represented by their attire, possessions, but mainly by how they are treated by the rest of the community. In archaeological record, the result of this treatment is reflected in the grave inventory. With persons of exceptional status, be it acquired or ascribed, we can expect a burial rite which is significantly differing from the average in terms of richness and variability of the inventory. While it can be argued whether grave inventories reflect the actual social standing of the buried person during their lifetime or rather that of their mourning kin, it is very likely that regularities observed in the burial rite linked to specific age and gender groups testify of the presence of such social categories in the community.

To be able to interpret the composition of grave inventories and their spatial distribution inside the graves and over the settlement in a social context, we must assume the following:

1. Attributes of grave inventories connected with a specific gender and/or age group or a housing area within the settlement reflect the presence of a social category within the community.
2. Burials, which are exceptional in terms of quantity, composition or displacement of grave inventories, occurring significantly more often within a certain social group reflect an elevated or exceptional social status of this group.
3. Particular artefact types, occurring predominantly in exceptional burials can be considered symbols of status of the deceased or their families.

Assessing the richness or exceptionality of a burial requires some protocol, by which to quantify it. One way to do this is based on prior knowledge about the value of different types of materials and artefacts. These values are summed for all inventory items of individual graves, normalized and a Social Index is computed for each grave. Several studies have used this method for evaluation of Bronze Age or later cemeteries, but for Neolithic contexts, where unambiguously prestigious materials such as bronze or gold are very scarcely found, the computation of a Social Index cannot produce plausible results. We can, however, use multivariate statistical techniques to quantify to what degree a grave good or its attribute is typical for the average burial, and then observe the deviation of the inventories of individual burials from this average.

Based on variations of burial rite coinciding with the age or sex of the deceased or with a specific location within the settlement, we will examine the social complexity of a Post-LBK community of the Lengyel Culture settlement in Svodín in south-western Slovakia (*Figure 1*).

FIGURE 1. Location of the site Svodín – Busahegy within Central Europe.

MATERIALS AND METHODS

The Neolithic settlement at Svodín – Busahegy, excavated by V. Němejcová-Pavúková in the years 1971–1983 (1986b, 1995) is one of the few Post-LBK sites with preserved housing, burial and ritual structures, all dating to the first stage of the Lengyel Culture (around 4800 cal BC). The remains of 35–40 houses, two circular ditch enclosures, 113 graves and hundreds of pits have been unearthed, providing a substantial amount of archaeological data which can be used for a quantitative analysis of the material cultural expression of a Neolithic community.

Settlement burials are a typical phenomenon of the Post-LBK period. In Svodín, the graves are distributed around housing structures, forming seven distinct spatial groups (*Figure 2*) and seem to be contemporary with the settlement (Demján 2012: 91).

Anthropological analysis of the 115 individuals in 113 graves dating to the Lengyel Culture by Jakab (1986 and unpublished results, Demján 2010: 102–106) could

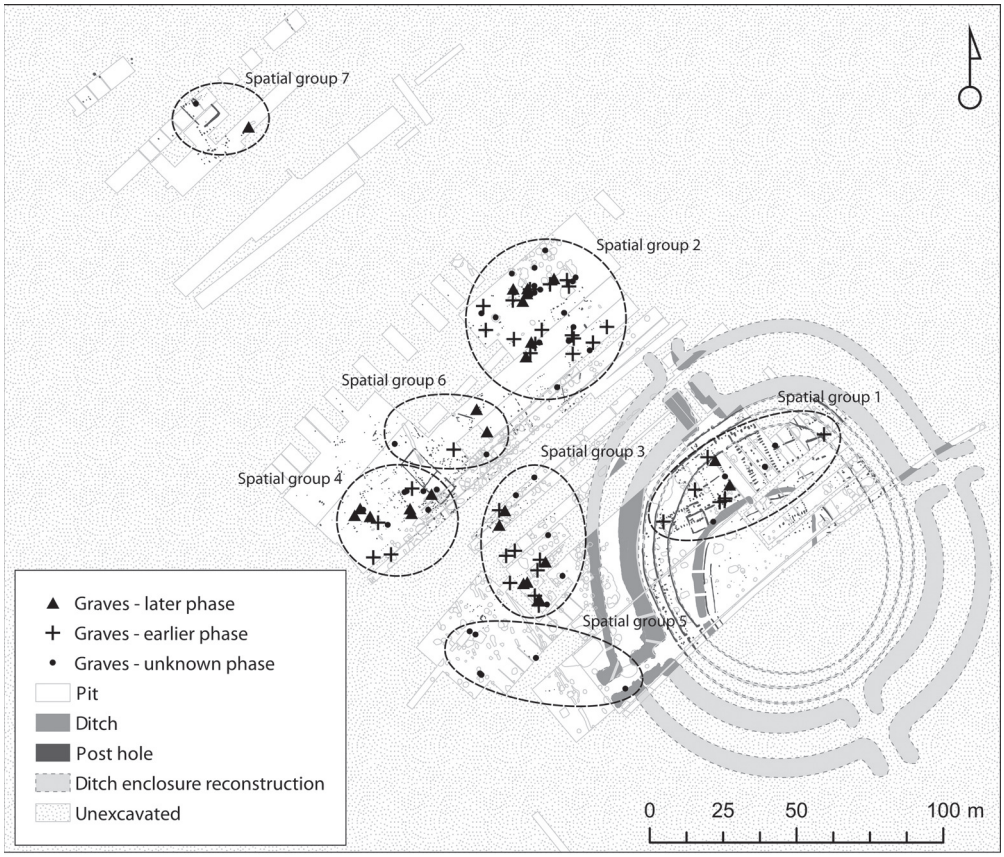

FIGURE 2. Spatial distribution of graves and architectural features on the site Svodín – Busahegy.

determine the sex in 60 out of 115 individuals, showing a higher ratio of females (36) over males (24). Age could be determined for 110 individuals, of which 48 were children. The most represented age group is Infans II with 24 individuals. The highest mortality among adults is in the age group Adultus II for both sexes (15 individuals). Overall, the age and sex distribution shows no distinct bias towards a particular age or sex group, regarding that it represents an early agrarian community where a high child mortality and an increased mortality of juvenile and young adult females can be expected (*Figure 3*).

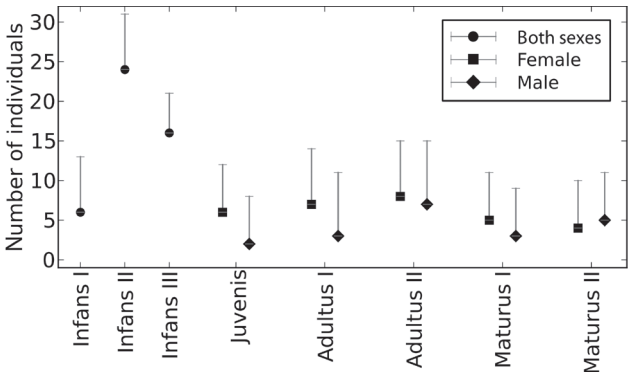

FIGURE 3. Age and sex distribution of the buried individuals. The error bars indicate maximal possible actual numbers accounting for the fact that age or sex could not be precisely determined for all individuals.

Most of the graves contained offerings (107 out of 113), which in 106 cases allowed for a quantitative statistical analysis. Previous morphometric and typological studies of the grave inventories using multivariate statistical analysis resulted in a seriation of the graves into four chronological phases (Demján 2012: Figure 12), of which phases I and II will be considered the earlier phase, and phases III and IV the later phase for the purpose of this paper. Stratigraphic evidence also points to a multi-phase habitation of the settlement. The original excavator recognised a phase before the construction of the circular enclosure, two phases with enclosures and possibly a post-enclosure phase (Němejcová-Pavúková 1986a). Preliminary results of the ongoing analysis of stratigraphic relations, orientation and typology of the housing structures in Svodín by the author of this paper indicate the existence of two settlement phases before the construction of the first circular enclosure, two phases before and one phase after the construction of the second circular enclosure.

In order to infer about the social standing of a person based on the grave inventory with which they were buried, we need a way to quantify the richness or exceptionality of the burial. Several previous studies have addressed this problem using different approaches. The concept of a social index (Sozialindex) was adapted from sociology (Müller 1994, Rebay 2006). It reflects the standing of the deceased on the social ladder and is well suited for assessing vertical social differentiation. The Sozialindex has several components which are weighed differently based on the author's consideration and combined to create a summary index. Assigning weights to different materials, quantities, volumes or types of grave offerings is a key element of this approach, requiring prior knowledge of their value to the examined society. Results of statistical analysis, such as plurality or rarity of certain grave goods within the whole assemblage are also considered in the computation of the final index.

While the Sozialindex is well suited for analysing cemeteries from the later prehistory, where we can assume a greater social importance of certain rare materials and funerary monuments which clearly reflect an elevated standing of the interred, there is a considerable potential for bias in the arbitrary assigning of weights or values to different aspects of the burial rite.

Social aspects of Post-LBK communities in south Transdanubia based on their burials were examined by Zalai-Gaál (1988, 2002, 2010). The method was based on descriptive statistical analysis of various aspects of the burial rite, from which the author inferred the standing of the deceased in a strictly hierarchical structure, which was a priori assumed. The position of an individual on the social ladder is determined based on the frequency of grave goods for which the author assumes a certain symbolic meaning (Zalai-Gaál 1988: 110–156, 2010: 71, 132). The combination of a "traditional" approach to the interpretation of grave inventories and a hierarchical classification based on the quantification of the presence of ritual groups (Sittengrupen) thus identified has good potential for archaeological sociological analysis at a regional level. Especially sites with a smaller number of graves do not allow for a more extensive application of statistical procedures to help eliminate bias related to prior definition of attributes of social status. Compared to the Sozialindex, this approach uses fewer prior assumptions, as the author only selects status-related attributes and does not assign different weights to them.

A deductive approach to the identification of social differences in grave inventories was chosen by Siklósi

(2004) in a study about prestige goods in the Neolithic of the Carpathian Basin. The author defined prestige items based on contextual analysis, stressing that such definition must be free of subjective evaluation of certain objects and materials based on our own value system. The social structure of a Lengyel Culture settlement in Aszód (Hungary) was also examined using this approach, although a statistical analysis was not possible because the grave inventories were either too homogenous or exhibited too much variability to show clear trends (Siklósi 2007: 195–196). Statistical correlation and multivariate analysis was possible in the study of social inequality within Post-LBK societies of the eastern Carpathian Basin (Siklósi 2010). Correlation coefficients were used to determine connection of certain grave inventory items with age and sex groups. Multivariate statistics were subsequently used to differentiate the social and chronological dimensions within the observed structures (Siklósi 2010: 120). The chaining of deductive and inductive approaches allowed to a more detailed and less biased study of the social complexity in the Post-LBK period than would be possible with the exclusive use of "traditional" interpretation or statistical approach.

The statistical method used to assess exceptionality of burials in this study was Principal Component Analysis (PCA), which produces a series of vectors (or factors), the components of which represent typical combinations of observed variables occurring in the assemblage. In this case the assemblage consisted of 106 burials from Svodín, which contained a sufficient amount of grave goods to perform a statistical analysis. These vectors represent typical configurations of grave inventories with regards to ceramic shapes, decoration and non-ceramic grave goods such as stone, bone or spondylus artefacts. The PCA assigns every individual of the studied set a factor score representing a measure to which the individual corresponds to a particular vector. The average of a factor score computed using the regression method for the whole assemblage will be zero, with a standard deviation of one (Distefano *et al.* 2009: 4). Individuals with a score of more than one can be therefore considered as untypical, or exceptional for the particular vector. All factor scores of an individual can then be combined in a way that preserves the information about the deviations, using a Root Mean Square (RMS, also known as a quadratic mean). The value of this mean, normed for the whole assemblage can be regarded as a component of the Exceptionality Index (EI) in the respective category of nominal attributes. For n values x it is given as:

$$RMS = \sqrt{\frac{1}{n}\sum_{i=1}^{n} x_i^2}$$

The relation of RMS to the arithmetic mean and the standard deviation σ is (Bissell, Chapman 1992: 64):

$$x_{rms}^2 = \overline{x}^2 + \sigma_x^2$$

The EI components for different nominal attributes ($EI_{attribute}$) for an individual grave g were computed as the RMS of factor scores s_i for all vectors i extracted for that particular attribute and normalized to range [0,1]:

$$EI_{attribute_g} = \sqrt{\frac{1}{n}\sum_{i=1}^{n} s_i^2}$$

$$EI_{attribute_g} = \frac{EI_{attribute_g}}{max\ EI_{attribute}}$$

n: number extracted vectors

s_i: factor scores

The EI component of placement of grave goods ($EI_{placement}$) was computed based on a method proposed by Galeta *et al.* (2008) using the following algorithm:

1. Normalize coordinates of grave goods in relation to the axis of the body and distance between the head and feet.
2. For each item type, calculate the index of randomness RI:

$$RI = \frac{simdist_1 - obsdist}{simdist_{99} - simdist_1}$$

$simdist_1$: 1st percentile of mean distances to 9 nearest neighbours for 10000 simulated random distributions of finds

$simdist_{99}$: 99th percentile of mean distances to 9 nearest neighbours for 10000 simulated random distributions of finds

obsdist: mean distance to 9 nearest neighbours for all finds of this type

3. For each item in every grave calculate index of distance DI:

$$DI = \frac{mean\ distance\ to\ all\ other\ finds\ of\ its\ type}{maximum\ distance\ of\ a\ find\ of\ this\ type\ to\ all\ other\ finds\ of\ this\ type}$$

4. For every find i calculate its partial EI normalized to range [0,1]:

$$EI_{find_i} = RI * DI$$

$$EI_{find_i} = \frac{EI_{find_i}}{max\ EI_{find}}$$

5. For every grave g calculate EI component of placement as the RMS of partial EIs for every find i normalized to 1:

$$EI_{placement_g} = \sqrt{\frac{1}{n}\sum_{i=1}^{n} EI_{find_i}^{\,2}}$$

$$EI_{placement_g} = \frac{EI_{placement_g}}{max\ EI_{placement}}$$

n: number of finds in grave

The overall value of EI for individual graves g was calculated as the RMS of its components for all nominal attributes and placement and normalized to range [0,1]:

$$EI_g = \sqrt{\frac{1}{5}\left(EI^2_{shapes_g} + EI^2_{painting_g} + EI^2_{plastic_g} + EI^2_{nonceramic_g} + EI^2_{placement_g}\right)}$$

$$EI_g = \frac{EI_g}{max\ EI}$$

Specific burial attributes (particular artefact types or their specific combination) can be seen as connected with exceptional burials when they appear predominantly in such burials with a frequency which can be considered statistically significant (or non-random). For datasets where the theoretical distribution is difficult to assess and the sample size is too small for direct statistical inference, resampling methods such as bootstrapping provide means to estimate significance of observed structures (Efron 1979, Sosna *et al*. 2008). This method was used to compare the observed average value of the Exceptionality Index (EI) within a specific social group with an interval of values the EI would assume if exceptional burials were distributed randomly between all social groups.

A similar method was used to assess the significance of correlation between specific burial attributes and social or spatial groups within the settlement.

After obtaining an Exceptionality Index for all burials, correlation of exceptionality with different social and spatial groups within the settlement was computed. Significantly higher values of exceptionality for burials of a specific gender or age group would infer the presence of ascribed status based on these attributes and a stratification of the society along the gender or age axis. High exceptionality associated with a spatial group within the settlement could be connected with the presence of status based on kinship. To identify persons with acquired status, we have to look for exceptional burials of members of gender or age groups with low ascribed status. Lastly, we can identify artefact types found predominantly in exceptional burials. They can be considered as symbols of status, or generally brought in connection with an extraordinary burial ritual.

All resampling tests for the purpose of this study were done using a Monte Carlo algorithm with 10000 iterations. Calculations were performed using the SciPy computing environment for the Python programming language (Oliphant 2007).

RESULTS

For all observed age, gender and spatial groups, I have compared mean values of EI with confidence intervals, into which 95% of means would fall if they were distributed randomly among the graves (*Figure 4*). A significantly high value of average EI could be observed for male burials, especially for the age group Maturus. This inequality could however not be observed in the 18 most exceptional burials (with EI one standard deviation or more higher than average), where females (6) males (7) and children (5) were almost equally represented.

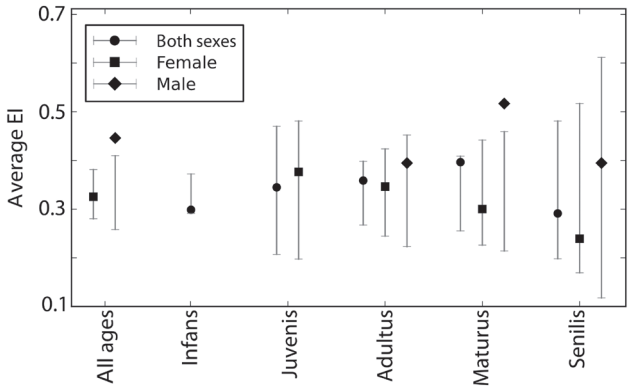

FIGURE 4. Average Exceptionality Index (EI) for different age and sex groups. The error bars indicate intervals into which 95% of means would fall in case of a random distribution of EI among burials.

Computing average EI separately for graves from the earlier and later chronological phase of the settlement has shown an increase of differences in the exceptionality of burials over time, with the prominent role of male burials visible only in the later phase (*Figure 5*).

Grave offerings connected with exceptional status could be identified by correlating their frequencies of incidence and factor scores representing their typical combinations with values of EI. Inventory types could also be connected with particular age, sex and spatial

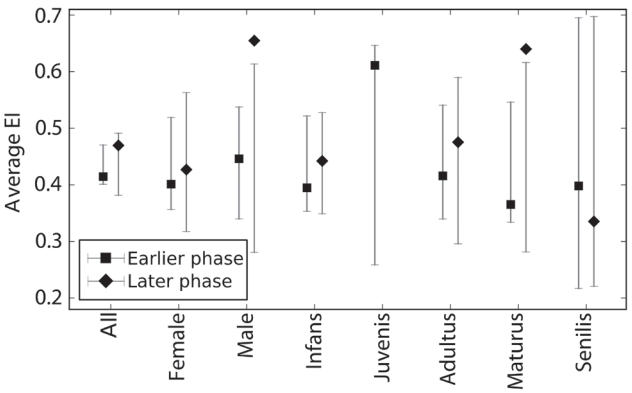

FIGURE 5. Average Exceptionality Index (EI) for different age and sex groups for burials from the earlier and later chronological phases. The error bars indicate intervals into which 95% of means would fall in case of a random distribution of EI among burials.

groups by statistically assessing their frequency of incidence within a particular group. When combined, the results of these analyses create a multidimensional space of interconnected attributes of burial rite, forming clusters along the spatial, age and sex grouping. I have attempted to visualize the emerging structures using the network analysis software Cytoscape (Cline *et al.* 2007), selecting only grave goods showing a significant correlation with a specific age, sex or spatial group and also with high values of EI (*Figure 6*). Recognizable patterns in the selection of grave goods appear in the age groups Infans, Adultus and Maturus for males and Infans, Juvenis and Adultus for females from spatial groups one to four. The highest complexity can be observed in spatial group four, where also the most exceptional burials can be found, although this group is not the largest in terms of area nor the number of graves.

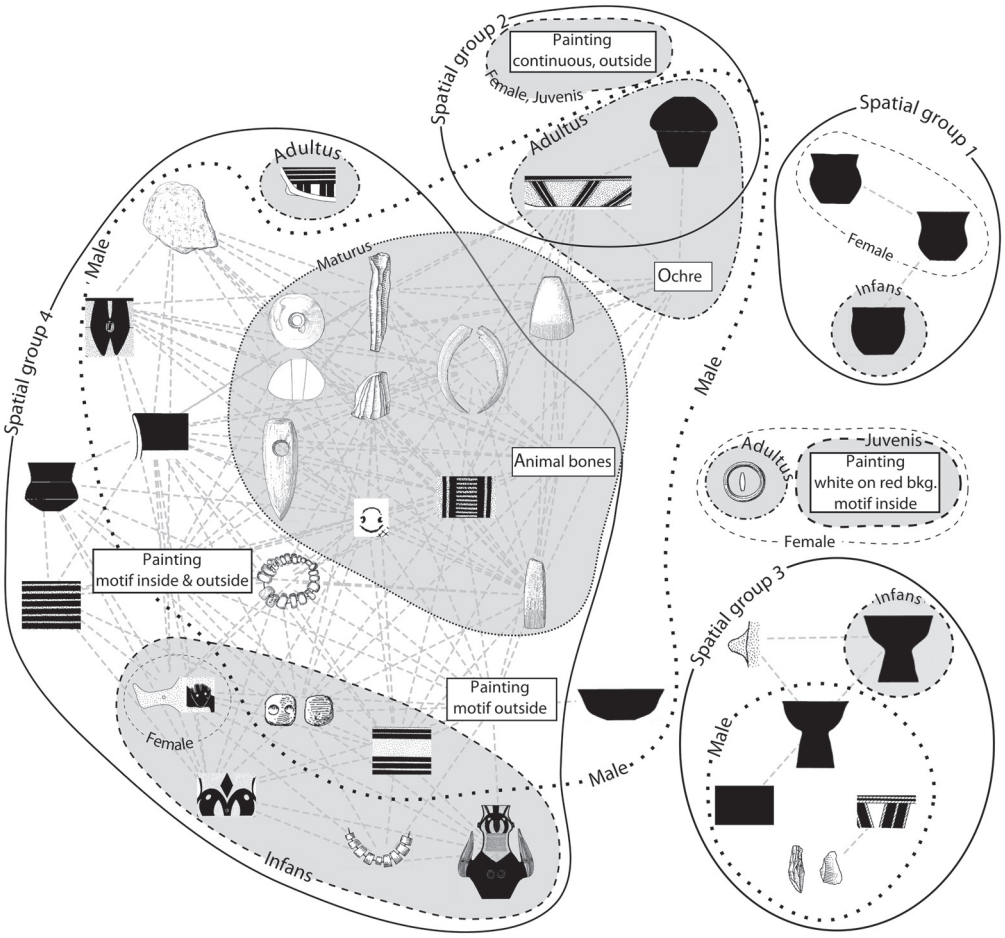

FIGURE 6. Network diagram showing grave inventory types correlating with exceptional burials of different age, sex and spatial groups. Grey dashed lines show correlations significant within a 99% confidence interval.

Male individuals from the age group Maturus in this spatial group can be associated with the most types of inventory connected also with a high EI value. There are also some inventory items associated with age and sex groups independently of their spatial distribution. Although the gender could not be anthropologically identified for child burials, certain grave goods or factors occur predominantly in graves of adult individuals of one sex and graves of children, while they are almost never found with individuals of the opposite sex. Such inventory types also very rarely occur together in one grave of an infant. This is indirect evidence that gender specific inventories exist even for child burials.

DISCUSSION

Limits of anthropological interpretation of archaeological data

Using grave inventories as a proxy for social relations within a Neolithic community in this study was based on computing an Exceptionality Index (EI) for all considered burials. Contrary to the traditional deductive approach, it does not depend on prior selection or weighing of attributes of prestige and only requires a sufficiently representative sample of find contexts. Correlation of high values of EI with the presence of prestigious items in graves confirms the archaeological relevance of this method. The ability to detect symbols of status which are not of a prestigious nature expands the possibilities to study social complexity in areas and time periods where prestigious materials such as metal are not present.

A major limitation to any study attempting to infer about human behaviour based on material culture lies in our lack of knowledge about circumstances of the formation of the archaeological record. It is impossible to archaeologically detect the emotional aspect of the burial of a loved person which might well have influenced the final composition of the grave inventory. It is also difficult to recognize whether the social status as perceived based on the burial rite was enjoyed by the interred person during their lifetime, or whether it was ascribed to them in connection with their passing. One such example could be a ritual offering of an individual. A status could also be symbolic, with the person having a symbolic meaning to the community, as is the case of pre-pubescent girls chosen to represent the deity Kumari in southern Asia whose social standing significantly decreases after they reach puberty and are no longer eligible for their function (van Kooij 1978: 10).

The difficulty to clearly distinguish between social, chronological and other structures in the archaeological data is also a potential source of error. We have to make sure, that exceptionality of certain find assemblages is not just the product of incompleteness of the studied dataset. In the case of Svodín, the number of graves with anthropologically identified age and/or sex is sufficiently high to make statistically significant inferences about connections of certain inventory attributes with particular social groups. Evidence from new excavations on the site could further enhance and precise our conclusions, but should not radically change them.

To avoid the abovementioned pitfalls, it is necessary to interpret and compare the structures identified in all stages of the analysis with external evidence and always consider the statistical significance of our observations. For example it is unlikely that chronological structures would strongly correlate with a certain age or sex group, but it is possible that they would follow some spatial pattern. Also the expression of a personal relationship with the deceased would not create statistically significant structures but rather peaks of exceptionality not correlated with any extraneous attributes such as age, sex or spatial group.

Statistical analysis of the exceptionality of burial contexts from multiple Post-LBK sites from Central Europe would help shed light on rarely occurring phenomena, such as the presence of mace-heads, anthropomorphic vessels or canines in graves, which could possibly be connected with very high social standing of the interred.

Other proxies of social complexity, such as housing and monumental structures, or selective burials on tells should be used to complete our picture of social relations within Post-LBK communities, as can be seen in the work of Siklósi (2013).

Scientific methods, such as DNA and isotope analysis could help answer questions of kinship within the studied communities and relations between the settlements.

Social complexity of a Post-LBK community

Evidence of social complexity can be observed in different aspects of material culture already in the LBK period of the Central European Neolithic. Symbols of status, related mostly to male burials can be seen on the LBK cemetery in Nitra, Slovakia (Pavúk 1972) and also in a wider Central European context on sites such as Vedrovice, Aiterhofen and other LBK cemeteries (Květina 2004: 387, Jonh 2011: 44). In the Post-LBK period we see a further increase of social differentiation, reflected in a higher variability of the burial rite,

increased diversification of settlement areas and the construction of more formalized and extensive monumental architecture requiring coordinated collective labour. This development is confirmed by studies from other contemporary settlements in Central Europe (Siklósi 2013, Zalai-Gaál 2010). Already the author of excavations at Svodín mentions noticeable differences in grave offerings of male and female burials (Němejcová-Pavúková 1986b: 145). The results of this study have confirmed these observations. Compared to the previous period, we see a more pronounced vertical social stratification with middle aged men assuming the highest rank in the community.

Variability in burial customs associated with different spatial groups indicates horizontal and vertical social differences between these groups. The presence of housing areas and their chronological relation to the burials in Svodín is still the subject of research, but given that the graves are clustered around the housing structures and there is no correlation between their typo-chronological sequence and spatial distribution in relation to the settlement phases, it is possible that the burials are grouped based on kinship. This kind of connection is especially visible in the inventories of male burials, including child burials with typically male inventories (*Figure 6*). The existence of housing areas with regularly renewed housing and storage structures is observed already in the LBK period (Pavúk 1994: 185–197). Recent studies on the structure of settlement areas on LBK sites show indices for social hierarchy on the household level (Lenneis *et al.* 2010). Well preserved anthropological material from Lengyel Culture burials at Mórágy made possible a serological analysis which indicates kinship between individuals within grave groups (Zalai-Gaál 2002: 58), although the palaeoserological method could not yet be independently reproduced and requires further verification through aDNA analyses.

The higher average exceptionality of burials from the typologically determined later phase indicates a gradual increase in social complexity over time. A similar phenomenon can be observed on the contemporary Lengyel Culture settlement in Zengővárkony (Dombay 1960: 200, Siklósi 2010, Zalai-Gaál 2010: 250). Combined with the prevalence of exceptional burials in one of the grave groups (spatial group 4), it could indicate a hereditary aspect of social status. Despite a significant asymmetry in the distribution of EI between ages and genders on the whole, both males and females, adults and infants are equally represented in the top 18 burials in terms of exceptionality. This indicates that status was not determined by age or gender alone, but could be either inherited or acquired during lifetime.

Some of the grave goods from Svodín connected with high status can be described as prestigious items. For the Post-LBK period in Central Europe, we can assume that spondylus and copper ornaments, boar tusk pendants and mace-heads played such a role (Siklósi 2004: 53). With the exception of copper artefacts all of them occur in burial inventories in Svodín. Connection of these items with particular social groups corresponds with observations from other contemporary sites. The social importance of spondylus becomes apparent already in the LBK period. Richly furnished male burials with spondylus pendants as a typical grave good are observed at the LBK cemeteries in Nitra (Pavúk 1972: 55) and Vedrovice (Květina 2004: 386). This tradition seems to continue at Svodín. Large spondylus beads are found almost exclusively in exceptionally furnished male burials. Spondylus played a less prominent role at other known contemporary settlements. A connection of spondylus with burials of adult females and children can be observed at Aszód (Siklósi, Csengeri 2011: 56). Boar tusk pendants as an attribute of prestige start to appear at Neolithic cemeteries in the area of the Pannonian Plain with the advent of the Post-LBK period. In Svodín, they are prevalent in graves of middle aged males, similar to settlement burials from Aszód (Siklósi 2007: 197) and Zengővárkony (Dombay 1960: 231). Mace-heads from various, often exclusive, materials are also a typical attribute of rich male burials on Post-LBK settlements (Siklósi 2007: 197) with a single known exception from Villánykövesd, where such mace-head was found in the grave of an individual of the age group Infans I (Zalai-Gaál 1991: 396). The find of a mace-head in the grave of an adult female at a LBK settlement in Bajč (Cheben 2000: 72–73) provides an insight into the development of social differentiation in the previous era. Remains of dogs found in articulated position prevalently in rich graves of male individuals point to another possible candidate for an indicator of status (Zalai-Gaál *et al.* 2011: 69). One such case is known also from grave 3/71 in Svodín (Němejcová-Pavúková 1986b: 148) containing a male of the age group Adultus II interred with a canine with a value of EI higher than double standard deviation.

In regard to the speed of change in social complexity which can be observed between the earlier and later chronological phases of the settlement, it can only be said with certainty that it occurred within the first stage of the Lengyel Culture. Latest yet unpublished radiocarbon dates from grave contexts in Svodín show a range of less than 300 years. Changes may have been

accelerated by outside impulses – cultural influences from the east and south are easily recognizable in the Lengyel find assemblages and monumental architecture – but the burials from Svodín bear witness of a development taking place locally, its perpetrators being the members of a continuously evolving community.

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