

## CHANGING HORIZONS OF MATERIAL CULTURE: Spatial Aspects of Symbolic and Everyday Activities in Late Copper Age Settlements

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*Current inquiries and controversies as well as the research history of the late Copper Age, and especially the Baden culture, have been addressed in a number of publications in the last decades (BALCER 1988; PELISIAK 1991; FURHOLT 2008A; 2008B; 2009; RACZKY 2009; SACHSSE 2008, 2010, BONDÁR 2002, 2009, 2010; FÁBIÁN 2013; FÁBIÁN ET AL. 2013; RAJNA 2016 inter alia). Of the concurrent cultural traits that appeared in most of Central Europe, pottery styles have long been the focus of international research as an important, and archaeologically accessible, element of cultural cohesion (FURHOLT 2008, 619). Recent scholarship views the Baden phenomenon as a complex rather than an archaeologically discreet population or a distinct culture. Stylistic elements that reflect regional, societal, behavioral, and chronological differences are available for study mostly on ornamental ware. Ornamental pottery is often interpreted as artifacts used for self-definition by communities; however, comparative analyses of Central European findings reveal that attention should also be given to the coarse household ware, which has been relatively neglected by scholarship. These latter artifacts were more closely associated with the everyday life of these communities due to their function and production (FURHOLT 2008, 627).*

Our recently launched research project takes the household as a basic unit through which the Baden complex is analyzed. Research on the household unit, as a small and universal element that reflects everyday life of a society, has gained a foothold in archaeology, as evident in the number of scholarly works published on prehistoric households and small communities (TRINGHAM 1995; KUIJT 2000; PERLES 2001; ROBB 2007; SOUVATZI 2008; WEBLEY 2008; BORIĆ 2008; PAVLŮ 2010; DOUGLASS – GONLIN 2012; ŐSRÉGÉSZETI LEVELEK 2013). Their complex and multidisciplinary study opens up possibilities that go far beyond the exploration of single households, and therefore, may serve as a starting point for a wide range of directions in socio-archaeological research.

Household archaeology usually takes as a starting point the spatial arrangement of features such as pits and traces of houses. Late Copper Age and Baden sites typically show no traces of houses, which means that these spatial relations cannot serve as a basis for study. Therefore, one must take a reversed approach in order to establish the smallest identifiable social unit.

This research project is based on three doctoral dissertations (CSIPPÁN 2012; FÁBIÁN 2014, RAJNA 2016), in which the authors attempted to identify households in two different ways, creating a starting point for the study of Baden society and settlement structure. These works hypothesized that traces of everyday activities around a house can be identified because they must have been confined to a well-defined area and a well-defined period of time. The present research interprets pottery finds (*Fig. 1*) and other artifacts associated with everyday activities (tools, articles of use) from qualitative (*Figs. 2-3*), quantitative, and semiotic aspects, with a special emphasis on the spatial distribution and density of the finds, and the relation between these.

Statistical analyses of clusters of features, along with the spatial patterns of the artifacts and organic remains recovered from them, enables one to define



*Fig. 1. Bowl with incised decoration from Balatonkeresztúr Réti-dűlő (Photo by Fanni Dénes)*



Fig. 2. Bone objects and tools from the Copper Age settlement at Abony 36 (Turjányos-dűlő)  
(Photo by Fanni Dénes)



Fig. 3. Chipped and polished stone tools and stone raw material from the site of Abony 36 (Turjányos-dűlő)  
(Photo by Fanni Dénes)

activity zones associated with individual households (WINTER 1976, 25; WILK – RATHJE 1982; RAPOPORT 1990; BLANTON 1994; HENDON 1996; JONGSMA – GREENFIELD 2003, 21; SALISBURY 2016). Households are not only analytical units but they also determine the level of interpretation of community activities and interactions, and through this, they define a number of characteristics of a community's life and material culture (WILK RATHJE 1982, 617-618; RAPOPORT 1990, 9-20; BAILEY 1996, 143). Therefore, one of the main tasks of the research project is to establish a methodology for identifying household units in the absence of house remains. Researching everyday activities facilitates our understanding of the profane and sacred life of prehistoric communities, revealing the socio-economic, political, and ideological concepts of the household as the most basic unit of society most basic unit of society (DOUGLASS – GOLIN 2012). The planned research project thus has the potential to take an important step towards the understanding of the Baden network of settlements and socio-economic connections.

The project is based on seven archaeological sites, most of which remain unpublished: Solt Erdélyi-tanya (SOMOGYVÁRI 2004), Balatonkeresztúr Réti-dűlő (FÁBIÁN 2007), Abony Turjányos-dűlő (FÁBIÁN – SERLEGI 2009), Abony 49 Elsővíz-dűlő II (RAJNA 2006; 2011), Pécel Hatos-dűlő, Hódmezővásárhely Kopánc Olasz-tanya, and Tolna-Mözs Kenderföld-dűlő (Fig. 4). The combined quantity of finds is statistically significant and allows one to interpret the sites in a unified methodological framework, as well as to look for overarching patterns.

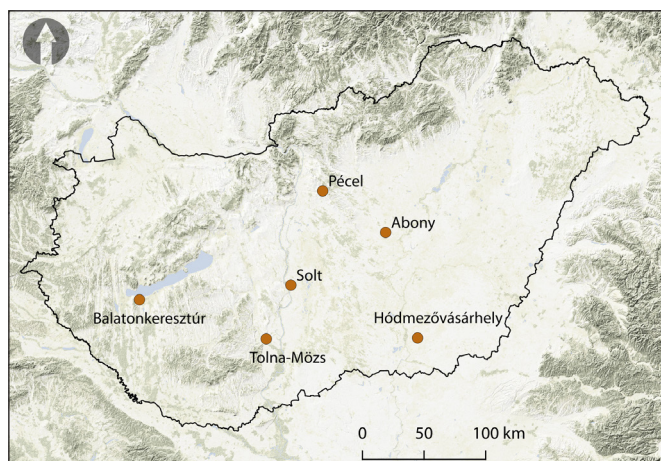


Fig. 4. The location of the late Copper Age sites involved in the research

Nine basic research questions have been formulated:

1. Identifying activity zones as traces of household units:

The research aims to unify the methodologies used by the afore-mentioned two doctoral dissertations, and to establish a method to identify activity zones and household units at archaeological sites where traces of dwelling houses are absent.

2. Analysis of similarities and differences:

After the analytical units are defined, their comparison should reveal the character of everyday activities

within them, and the question of division of labor between individual households may be raised.

### 3. Analysis of activities:

The project will map the spatial arrangement of prehistoric activities and their connections, and will address whether these were performed at all individual households, or only at certain households or places, and if there is any evidence for the organization of tasks beyond the household level.

### 4. Household Consumption:

Are there households where consumption is extraordinary, and if so, is this manifested through the composition of the assemblage, the consumption of animal products, and/or other phenomena? The analysis of household pottery (Fig. 5) has the potential to shed light on the size, composition, and wealth of a given household/consumption circle, and its position in the community hierarchy (SMITH 1987; KALLA 2013, 13).

### 5. Household utensils (sets):

Is there a defined set of tools (pottery, utensils, objects of everyday use) and phenomena that may be seen as the ‘toolkit’ for a household?

### 6. Basic repetitive patterns:

Are there any repetitive patterns that go beyond the level of analytical units of single households, and are these patterns, sets, or toolkits present in the activities performed in community spaces?

### 7. Community-level repetitive patterns:

In addition to identifying spaces of everyday activities, the research will focus on the perceptible traces of community life. Associated toolkits,

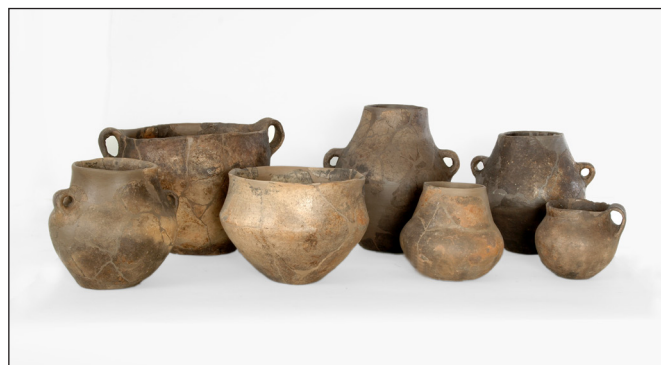


Fig. 5. Pottery from pit no. 408 at Abony 36 (Turjányos-dűlő) (Photo by Fanni Dénes)

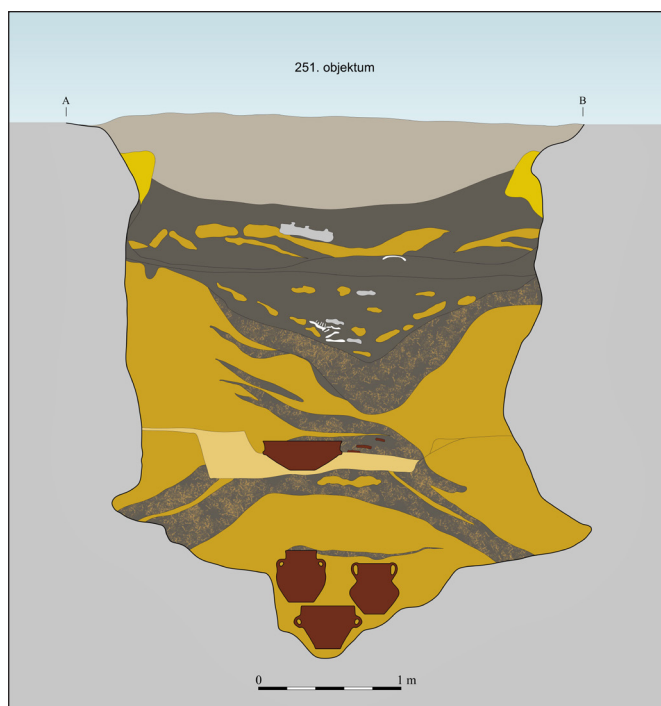


Fig. 6. Section drawing of deposits containing human and animal bones and vessels at Abony 36 (Turjányos-dűlő) (Made by Zsolt Réti)



Fig. 7. Animal deposition from the Baden settlement at Balatonkeresztúr Réti-dűlő



Fig. 8. Human remains surrounded with imprinted wattle-and-daub debris in pit no. 143 at Abony 36 (Turjányos-dűlő)

sets, and consumption patterns reveal how space was used, and shed light on the cyclic character of prehistoric community life. Through these means, it is possible to interpret regularities in such patterns, with implications for cultural life beyond everyday routines (HODDER 1982, 11). The so-called structured deposits (*Fig. 6*) that reflect symbolic activities offer an excellent opportunity to study the late Copper Age from this point of view. In these assemblages, objects of everyday use are deposited in culturally meaningful, codified ways to express ideological concepts. Animal deposits are typical for the Baden complex (POLLEX 1999, SZMYT 2006) (*Fig. 7*). An interpretation of these layers of various types of pottery, stone and bone tools, and animal and/or human remains (*Fig. 8*) addresses the act itself, such as the way the animal was deposited, as well as the act as it was understood by the community of the given settlement.

#### 8. Communal deposits:

Are these deposits associated with community spaces? What ‘toolkits’ were used during deposition? How can one interpret these sets of tools, and how did the ‘social life’ of these phenomena evolve (PREUCCEL 2006, 15)?

#### 9. Moving between spatial scales:

Taking as a starting point the smallest spatially defined unit of a community, that is, the household, the research explores everyday life and symbolic activities, and aims to offer a complex reconstruction of the socio-economic organization of late Copper Age settlements. This will pave the way to a deeper understanding of large-scale correlations behind the archaeological phenomena typical for the Baden complex.

## METHODS

This project will apply three different analytical approaches to the late Copper Age material culture:

1. Quantitative analysis of the finds
2. Qualitative analysis of the finds
3. Semiotic interpretation of the quality and quantity of the finds

The first task of key importance is to create a multi-level digital database that will serve as a basis for further investigations. This will include the basic data on archaeological features, and on the animal bones, tools, and artifacts recovered from them, as well as a detailed set of criteria, based on the typology of pottery, suitable to define the function of vessels. After identifying the functional types of the Copper Age settlement features involved in the study, the distribution of finds unearthed from different types of pits will be addressed. The database will facilitate explorative statistical investigations (correspondence analysis, multiple correspondence analysis, principal component analysis) that are particularly useful for this type of archaeological research. Based on these results, the connections between the hypothesized sets of phenomena that define a household will be projected to household units through GIS modeling, and interpreted at the higher organizational level of settlement structure.

The statistical and geo-spatial analysis of the finds will aid the qualitative and quantitative analysis of artifact categories. The unified criteria and methodology of data extraction makes possible a within-site GIS study to explore and display small-scale patterns of distribution. By applying the same GIS methods to all the sites involved in the project, even small differences in settlement structure will be revealed. As the sites represent different regions of the Carpathian Basin, the database will provide the means for inter-regional comparisons, with the potential to reveal connections on a larger scale than within or between individual settlements. This will contribute to an exploration of regional variations within the relatively unified character of Baden sites.

In addition to pottery and animal bones, other finds will also receive proper attention: polished or chipped stone tools, spindle whorls and weights, special finds, and organic matter sieved from soil sam-

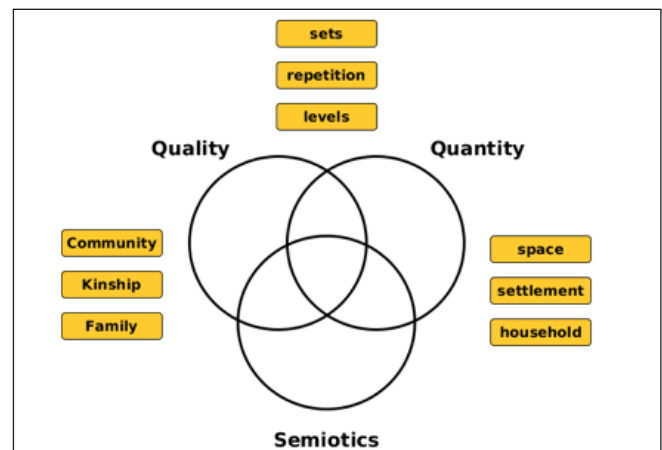




Fig. 9. Vessel rim with animal head protome  
(Photo by Fanni Dénes)

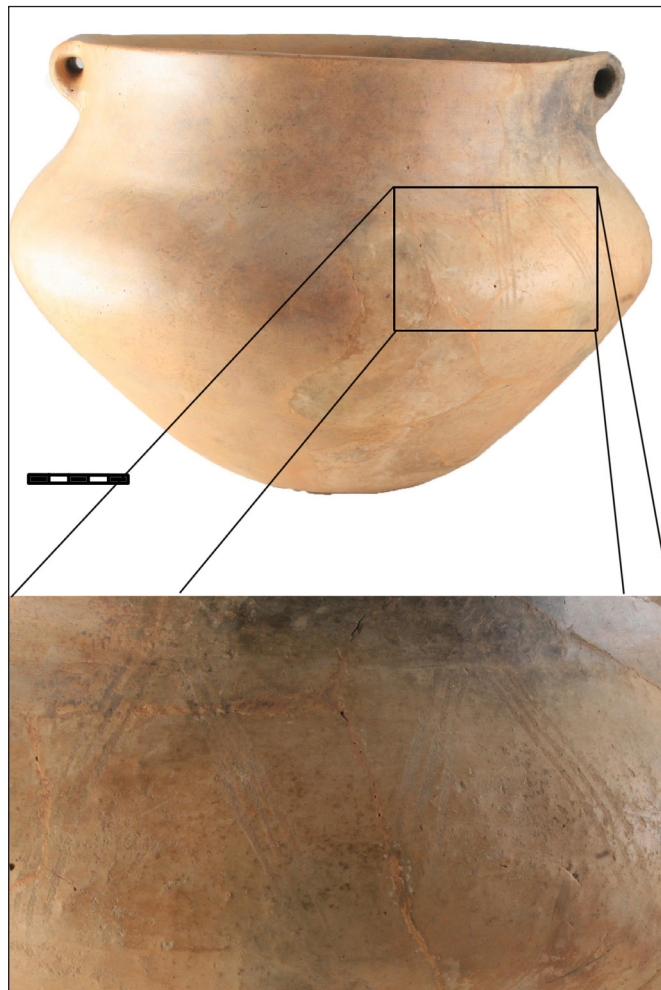


Fig. 10. Pottery decorated with red paint from Abony 49  
(Elsővíz-dűlő II)

ples. It is imperative to investigate the artifacts' raw material and wear marks in order to assess their function and the social status they had (Fig. 9). The study of archaeobotanical samples (and perhaps phytoliths and pollen) from Abony and Tolna-Mözs, combined with the information of the natural life cycles of these plants, will help reconstruct the season in which the plants were deposited, and explore if they were harvested in given periods or under specific weather conditions. Analyses on organic matter (Fourier-transform infrared spectroscopy and Raman spectroscopy, if available) will facilitate a better understanding of food consumption both in the everyday life and at symbolic occasions (Figs 10-11). The expected results from these analytical examinations will permit conclusions to be made on the size, complexity, and wealth of a given household, and its position in the community hierarchy.

Two of the seven sites date from the Proto-Boleráz period, and five are associated with the Baden complex. Thus, their comparative analysis has the potential to reveal chronological developments at the end of the middle and the beginning of the late Copper Age.



Fig. 11. Spoon decorated with red paint from Pécel 2  
(Hatos-dűlő)

Twenty-five AMS radiocarbon measurements planned during the project will refine already existing information on the sites of Abony Turjányos-dűlő, Abony 49 Elsővíz-dűlő II, Hódmezővásárhely Kopáncs, and Balatonkeresztúr Réti-dűlő. In the case of Tolna-Mözs Kenderföldek-dűlő, Pécel Hatos-dűlő, and Solt Erdélyi-tanya, these measurements will contribute new data to the absolute chronology model of these settlements and the everyday and symbolic activities associated with them. As resources are limited, carbon isotope tests will be taken only at sites favorable for such measurements. The project relies on traditional typo-chronological study combined with radiocarbon dating to shed light on the chronology of individual households. Semiotic studies will be undertaken primarily on special structured deposits.

### EXPECTED RESULTS

The strength of the project lies in its novel approach, that is, the examination of a community's deeply rooted organizational cohesion through the analysis of individual households and their interconnections. The project will provide a significant addition to our understanding of the Copper Age; the scientific publication of the archaeological sites of Solt Erdélyi-tanya, Tolna-Mözs Kenderföldek-dűlő, and Abony Turjányos-dűlő is an essential contribution in itself. The most far-reaching result, however, will be the establishment of a methodology that enables one to define activity zones around households, which will aid other research on past communities and settlement structures. In addition to building a comprehensive database, further results expected from the interdisciplinary investigations include a mapping of the semiotic and cultural connections reflected in the archaeological finds, as defined by the cycles of everyday life in the economic, social, and ideological spheres of late Copper Age settlements. The unified data recording process makes it possible to compare the sites in different geographical zones and draw conclusions about various aspects of everyday life on a regional level. Furthermore, the within-site analysis of settlements where both Proto-Boleráz and Baden pottery styles are present offers an opportunity to study the transitional character of the period.

Finally, this complex analytical method has an additional benefit: it will provide a methodology to test hypotheses about settlement structure in other periods where traces of dwellings are absent.

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