

THESIS OF THE  
DOCTORAL DISSERTATION

**The settlement pattern, chronology and cultural  
relations of the Tisza Culture in Northeast Hungary**

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## Thesis of the Doctoral Dissertation

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# The settlement pattern, chronology and cultural relations of the Tisza Culture in Northeast Hungary

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# Doctoral Dissertation

## Subject, state of research

The region and time interval chosen for the subject of the doctoral dissertation generated relatively little interest in the last few decades in spite of the fact that in Northeast Hungary the excavations of Late Neolithic settlements had already started at the beginning of the 1900s. Although Ferenc Tompa and Ida Bognár-Kutzián principally relied on these early assemblages in their systematizing chronological work, archaeological interest turned towards the southern tell settlements after the 1960s. It was only recently that on account of Polgár-Csőszhalom interest was directed back to this area. As a result of that, the chronology, settlement pattern and social organization of the Tisza Culture were clarified mainly on the basis of data derived from the tell settlements, but the sites and finds known from the northern part of the Great Hungarian Plain do not completely fit into this system. Therefore it has become timely to work out a synthesis for the Tisza Culture sites located north of Szolnok which can provide answers to questions concerning the processes characteristic of this region.

## Goals of the research

Within the confines of the doctoral dissertation I investigated the following questions concerning the Late Neolithic development of Northeast Hungary:

1. When did the Tisza Culture appear and in which regions did it spread?
2. Did the culture develop as a result of migration or local development?
3. What kind of settlement system did the Tisza Culture have and what kind of characteristics did the inner settlement structures have?
4. What was the inner chronological system of the region like?
5. What kind of relationship did exist between the Tisza and the Csőszhalom Cultures?
6. What kind of relations did the Tisza Culture have with the surrounding regions?
7. Why were the settlements of the Tisza Culture abandoned: did some local development bring about transition from the Late Neolithic Period to the Early Copper Age, or did other processes cause the disappearance of the culture?

## **Data used in the dissertation**

In order to answer these questions I could primarily rely on research records from former decades, since in this area – with the exception of the region of Polgár – there were only a few excavations. Due to collecting data in the museum repositories I was able to identify many new archaeological sites which have been unknown to Neolithic research so far, and which provided significant information about the Late Neolithic development history of the study area. I involved in the collection and analysis Late Neolithic sites located in Southeast Slovakia, since this region is culturally connected to the study area. I was able to identify thirty-seven settlements, out of which I analysed pottery finds yielded by thirteen Northeast Hungarian sites in the doctoral dissertation. Results provided by a detailed pottery analysis combined with ceramic finds known from publications enabled me to outline the evolution of the chronology and settlement pattern of the Tisza Culture.

## **Results**

The Tisza Culture – corresponding to the former theories – appeared without any antecedent in the northern part of the Great Hungarian Plain, first in the region of Tokaj, during the I-II transitional periods of the Tisza Culture. Migration from the south may have been in connection with the possession of obsidian, as this lithic raw material was of outstanding importance in that period. The northward spread of the culture may be explained by that. We know little about the existence of Middle Neolithic population at that time. However, there must have been some settlements belonging to this group, as it is suggested by data from Kenézlő-Báji-homok site. In this assemblage the earliest Tisza type decorated vessels were found together with a locally developed material connected to the Szilmeg Group. Nevertheless, the Bükk Culture certainly did not exist at that time, the disappearance of the culture is explained with climatic changes by Slovakian researchers. Along with the Tisza Culture, presumably with the aim of exploiting the obsidian mine, further cultures appeared in the broader region of the Zemplin Mountain. On the site of Ižkovce, near the Lengyel Culture the Stroke Ornamented Pottery Culture from Little Poland and its Samborzes-Opatów Group were also present.

The first, sporadic settlement was followed by a mass migration during Phase II of the Tisza Culture. Most of the sites located in the study area developed at that time. The Tisza Culture originating from the south established independent sites on the former banks of the Tisza River to the Zemplin Mountain. Settlements found south of the confluence of the Tisza and Bodrog Rivers form well-identifiable pairs along the left and right banks of the Tisza, but the settlement organization

markedly differs from the pattern characteristic of the south. Sites in the investigated area do not form clusters that is possible social or economic units. They are more likely independent settlements located in a greater or smaller distance from each other, having a sustenance area of their own. The analysis of settlement organization according could not demonstrate any signs of settlement hierarchy either in terms of size or location

At the Kisköre-Gát and Tiszapüspöki-Karancs-Háromág-dűlő sites, the inner settlement structure could be explored. The re-investigation of data from excavations conducted at Kisköre in the 1960s provided new data concerning settlement structure. The buildings outlined by post-holes stood next to each other surrounded by burials and economic features. This kind of settlement structure consisting of independent household units is characteristic of the period. It was also observed at the horizontal settlement of Polgár-Csőszhalom.

The excavation conducted at Tiszapüspöki-Karancs-Háromág-dűlő yielded data of a house which differed from the post-hole structure, the typical building form of the Late Neolithic Period. On this site a massive layer of burnt clay rubble was excavated with plank impressions. Under the burnt layer, there were not any traces of clay floor or construction elements sunken in the ground. On the basis of ethnographic analogies this building can be interpreted as a house built on wooden frames. Similar construction technique is supposed in the case of dwelling houses without construction elements sunken in the ground known from the area of Pre-Cucuteni and Cucuteni Cultures. The collection of dwelling rubbles similar to those from Tiszapüspöki from the Great Hungarian Plain and the surrounding area suggest that this type of dwelling construction technique was used in several settlements in the Carpathian Basin during the Late Neolithic Period. The house excavated at Szolnok-Tűzköves, for example, can be reconstructed as a house built on wooden frames, with wattle and daub walls.

According to the close, genetic southern connections, the pottery style of sites dated to Phase II of the Tisza Culture differs less from the sites located in the southern part of the Great Plain. In the assemblages all the classic Tisza vessel forms and decorations can be demonstrated. Besides the material culture, the close connections with the southern part of the Great Hungarian Plain can also be detected in the burial custom, although certain variations in the mortuary practice – for example the custom of burying the dead in extended position – may suggest a slowly forming local evolution in the northern region.

At the same time, parallel with the migration of the Tisza Culture, the population of the earlier cultures appearing in Southeast Slovakia started to expand to the south. They turned up in the Bodrog River Valley and in the north of the Great Plain. According to the testimony of finds, they penetrated to the region of Polgár. The process must have been peaceful, since there is not any archaeological

sign of conflicts or military events. It is characteristic of the sites found in the area that their pottery finds show the characteristic features of more than one culture from which one can infer that different groups of people belonging to different cultures may have settled at one settlement. One determinant part of these sites with mixed material is represented by the Tisza Culture, and next to that the Lengyel Culture and the Storke Ornamented Pottery Culture and its groups from Little Poland, the Samborzec-Opatów- and the Malice-Groups were also present.

Based on the geographical distribution and characteristics of sites showing mixed, southern Tisza and different northern cultural features, basic differences can be demonstrated between the northern and the southern study area. In the north the sites are found in higher numbers and closer to each other. In two regions – in the Bodrog River Valley and at the confluence of the Latorca and Laborec Rivers – settlement groups can be observed. The sizes of these settlements are far beyond the size of the northern Tisza sites, for example Bodrogzsadány-Akasztószér and Polgár-Csőszhalom exceeded 20 hectares. This kind of settlement extension is characteristic of the sites of the Lengyel and the Southern Tisza Cultures. There is a significant difference in the settlement type, as well. In this region tells also appear next to the horizontal settlements. Altogether five tell settlements have been identified so far, concentrated in two minor regions: the Bodrog River Valley and the region of Polgár, to which latter the site of Hajdúböszörmény-Pród may belong. Two out of the five tell settlements – Bodrogzsadány-Templomdomb and Sárospatak-Vár – were identified for the first time in the doctoral dissertation.

The northern tell settlements are very similar to the tells known from the southern part of the Great Plain – their size is under 3 hectares, surrounded by ditches, dense settlement structure, they were adjacent to horizontal settlements – the only difference can be found in the thickness of the sites. The northern tells do not exceed 1.5 m in height, except for Polgár-Csőszhalom, which can be interpreted by the shorter lifetime compared to the southern tells. We know little about the processes resulting in the formation of tells in the north, but it presumably correlates with the presence of the Tisza Culture, although tell settlements did not develop on the territory of the Tisza Culture north of Szolnok. In the cases of tell settlements the mixed cultural character is represented by the circular ditch systems originating from the Lengyel Culture. The analysis of settlement structure at Polgár-Csőszhalom showed definite differences between the tell and the horizontal settlements, suggesting with reason that tell and tell-like settlements that developed in the study area may have had a central role in the co-ordination of economic and exchange processes. The formation of tells in Northeast Hungary may have been the spatial manifestation of these economic/social changes.

The cultural mixture can also be demonstrated in the mortuary practice of sites. The two main components are the Lengyel and the Tisza Cultures, but the proportion is varying. On the Hungarian

and Southeast Slovakian sites located north of Bodrogkeresztúr the mortuary practice differs to a great extent from that of the Tisza Culture. It rather corresponds to the Lengyel Culture (high number of vessels, food, missing of red deer canine teeth, wild boar mandibles, wild boar tusk pendants and marine shells). The mortuary practice characteristic of sites located south of Bodrogkeresztúr show great similarities with the sites of the south Tisza Culture; however, many features (symbolic burials, red deer canine teeth, wild boar mandibles, wild boar tusk pendants) can be connected to the Lengyel Culture.

Based on pottery finds, the Neolithic research has created various group and culture units in the last 60 years for the sites showing mixed cultural features, although the settlements with different cultural compositions resulted from the same processes taking place in a geographically enclosed area. In my opinion, the sites cannot be connected to each other on the basis of their classic pottery style features. However, based on the similarities of mixed character, the same distribution area and the correspondences of settlement network, settlement structure, mortuary practice, exchange system it seems reasonable to treat these sites as an autonomous cultural unit, for which I recommend using the name Csőszhalom Culture.

Based on the pottery analysis of the Csőszhalom Culture, the life of the culture can be divided into three periods which correspond to Phases II, III and IV (Proto-Tiszapolgár) of the Tisza Culture. Phase I of the Csőszhalom Culture can be characterised by the formation, the sites appeared on the whole distribution area, from Southeast Slovakia to Polgár. The main characteristic feature of the early period was that in the ceramic assemblages more than one culture can be clearly identified next to which the local features also appeared, but their proportion was not dominant, yet. The Tisza Culture was present in all the settlements, for all intents and purposes, in the early phase of the Csőszhalom Culture played a significant role. At the time of Phase II of the Csőszhalom Culture the settlements of the autonomous Tisza Culture vanished from the area, and the Tisza components decreased also in the ceramic material. The influence of the Lengyel Culture increased accordingly, it became most representative influence in the locally developed material. Meanwhile a uniformity can be seen in the pottery style. The locally developed forms and decorations took over the leading role, and the pottery assemblages of the different sites became more and more similar to each other.

The decline of the Tisza Culture could also be demonstrated south from the Csőszhalom Culture. In most of the pottery finds from settlements located north of Szolnok one cannot identify ceramic forms and ornaments characteristic to the late, Tisza III Phase. This late evolutionary stage can only be proven only in the case of the Kisköre-Gát site. Certainly, it is possible that this southern ceramic trait was not present in this region, but because of the closeness of the Csőszhalom Culture it seems highly unimaginable.

The final phase of the Late Neolithic Period is indicated by the Proto-Tiszapolgár period identified mostly on tell settlements. Within the study area this ceramic assemblage could be identified solely on the Csőszhalom Culture sites. In a small region of that, between the Bodrog River Valley and the confluence of the Latorica and Laborec Rivers, a unique ceramic group developed, called Bodrogzsadány Type. The examination of the ceramic styles and observations made during the excavations of Sárospatak-Vár and Bodrogzsadány-Templomdomb confirm the assumption that the Csőszhalom Culture evolved without any break into the Early-Copper-Age Tiszapolgár Culture. The present work is unable to answer the question why the Tisza Culture settlements were abandoned at the end of the Late Neolithic Period and why the Proto-Tiszapolgár Phase was not present in the distribution area of the Tisza Culture. The observation made at the Kisköre-Gát site confirms this chronological hiatus, as the finds of both the Late Neolithic Tisza and the Early Copper Age Tiszapolgár Cultures were excavated, but the material connecting these two periods was missing. On the basis of these, the Tiszapolgár Culture appeared in this region after a certain hiatus, since there is not any data for continuously populated settlements.

As we have seen above, two separate cultural units could be distinguished in the area investigated in the doctoral dissertation that partly overlapped each other geographically. In order to outline the exchange systems of the two cultures it is not enough to examine the archaeological material excavated from these sites, it requires further investigations. During the Late Neolithic Period many raw material types are known, the distribution pattern of which can help the outlining of the exchange and cultural interactions at the time. Provided that these separately reconstructed trade systems are studied together, a more complex picture could be obtained concerning the exchange networks of the Carpathian Basin.

On the basis of the distribution of different lithic raw materials, marine shells, copper and possibly salt, two separate exchange systems can be reconstructed. One supplied the inner regions of the Carpathian Basin, with the Tisza River as its main artery. The Tisza settlements located north of Szolnok belonged to this "inner" network. These sites had the strongest connections with the tell settlements from the southern part of the Great Hungarian Plain. In addition, they show strong exchange relations with the Lengyel Culture through Aszód and to the north with sites found near Polgár. There was another exchange network with sites found outside the Carpathian Basin, in which the Csőszhalom Culture played a significant role. The settlements around the Zemplin Mountain could have functioned as a trading centre within this "outer" exchange system, taking part in the transportation of the raw materials between the Carpathian Basin and the area beyond. These settlements show the strongest connections with the sites located along the Berettyó and around

Polgár, and had strong relations with the area beyond the Carpathians and to the west with the Lengyel Culture.

Data analysed in the doctoral dissertation enabled me to outline the Late Neolithic cultural processes that existed in Northeast Hungary and Southeast Slovakia. Although the main goal of the dissertation was to examine the Tisza Culture, I also considered it of great importance to investigate the Csőszhalom Culture that developed in the north, because the Tisza Culture played an important role in the formation of the latter. Based on the complex investigation of the two cultures, the settlement pattern and chronological system of the Tisza Culture could be outlined and through this the questions concerning the appearance, evolution and cessation of the cultures could be answered. As the doctoral dissertation relied on the data of old excavations, the results cannot be considered final. Further, systematic researches need to demonstrate them.

### **Publications on the Subject of the Thesis**

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- Kovács, K. 2013 Late Neolithic Exchange Networks in the Carpathian Basin. In: Anders A. – Kulcsár G. (szerk.): *Moments in Time. Papers Presented to Pál Raczky on His 60th Birthday. Ősrégészeti Tanulmányok / Prehistoric Studies I*, Budapest, 385–400.