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## WHAT IS CHANGING AND WHEN – POST LINEAR POTTERY CULTURE LIFE IN CENTRAL EUROPE

*ABSTRACT: The initial contribution to this specialised volume introduced the timeframe and the core issues of the specific topic, i.e., the changes that are reflected in the material culture of the Early and Middle (or Late in the Czech or Slovak chronological system) Neolithic period around the transition from the 6<sup>th</sup> millennium to the 5<sup>th</sup> millennium BC. In particular, the following three subjects of interest were studied: 1) theoretical issues associated with the impetus for cultural change during the Linear Pottery culture (LBK) and Post-LBK cultures; 2) the spatial structure of the settlements and the characteristics of the settlement features during this period; and 3) the changes occurring in society, including the distribution of artefacts and supra-regional contacts. The approaches to different topics adopted by individual authors and their interpretations of their results were quite heterogeneous. However, high-quality material was still presented and interpretations were formulated that should be addressed further utilising archaeological sources beyond even Central Europe.*

*KEY WORDS: Archaeological culture – Culture change – Final LBK – Neolithic – Post-LBK – Site layout – Social complexity*

### INTRODUCTION

In recent years, several international conferences have focused on the Linear Pottery culture (LBK) in the second half of the 6<sup>th</sup> millennium BC and the post-LBK horizon, which can be dated mainly to the subsequent first half of the 5<sup>th</sup> millennium BC (selected sources include Zeeb-Lanz *Ed.* 2009, Smolnik *Ed.* 2012, Gleser,

Becker *Eds.* 2012). Great cultural and social transformations occurred during this period, which are the subject of this special volume of *Anthropologie* journal. The papers that comprise contributions to the session "What is Changing and When – Post-LBK life in Central Europe" were presented at the 19<sup>th</sup> Annual Meeting of the European Association of Archaeologists (EAA) in Pilsen 2013 (Stäuble *et al.* 2013). Traditionally,

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the transition from the 6<sup>th</sup> millennium to the 5<sup>th</sup> millennium is viewed as a break linked to the period of the LBK (ca 5500–5000/4900 BC), which was also linked to the beginning of innovations that can be interpreted as the emergence of new cultures and cultural groups (e.g., Preuss *Ed.* 1998). The questions addressed by the contributors to this volume are also linked to defining the overall concept of this cultural change, as follows. Must cultural change be viewed only from the perspective of the established nomenclature of archaeological cultures, or can the process also be perceived as representing a major transformation of the society during that period? In addition, what triggered this process? Is it possible to identify single or multiple agents of change, or are the causes unidentifiable? Finally, another major question needs to be addressed: did the different aspects that are generally considered when defining the "emergence of new cultures and cultural groups" occur simultaneously or did each have its own speed of development and change?

#### **CULTURAL CHANGE DURING LBK AND POST-LBK**

Empirically, it is possible to start from the fact that around the transition from the 6<sup>th</sup> millennium to the 5<sup>th</sup> millennium BC, changes to the material repertoire occurred in the majority of the Central European area. These changes were evident in a wide range of cultural markers and they were not restricted simply to the shape of pottery and its decorative forms, or the ground plans of houses. There were even evident in the manner of the burial rites adopted, as well as the production technologies, the distributions of raw materials, and certain stone tools. These signs can be understood in terms of the traditional idea of the formation of new archaeological cultures under the influence of an external impetus (such as demic diffusion and acculturation), or alternatively they can be treated as a result (following the path) of internal changes induced from within existing cultural entities (thereby echoing the regional patterns of the older Neolithic epoch associated with LBK; selected sources include Farruggia 2002, Gramsch 2009, Rulf, Zápotocká 1994: 23–24, 25, etc.).

As described in some of the contributions to this volume (See the articles by Gramsch, Link in this volume), this question remains open and its interpretation is inevitably influenced by differing paradigms. One of these, which is defined in terms of the adoption of a deterministic approach, comprises climate

change and adaptation as the main triggers or catalysts of change (e.g., Gronenborn 2010, Gronenborn *et al.* 2014, Stäuble 2014), i.e., demographic growth together with simultaneous changes in the social fabric. Alternatively, there might have been a change in the dominant religion, and thus in the contemporary mental categorisation of the social world (e.g., Spatz 2003). To understand the context of the period in question, it is necessary to focus on the archaeological background that follows chronologically the LBK horizon. This was succeeded by the no less turbulent period during the first half of the 5<sup>th</sup> millennium BC until the period when the first findings of copper items originated (ca 4500/4400 BC), which once again introduces a new cultural and social phenomenon according to the archaeological findings.

Equally important was the development of the LBK "cultural unit", which preceded the transition horizon dating to the cusp of the 6<sup>th</sup> and 5<sup>th</sup> millennia. Indicators of changes in the otherwise seemingly uniform habitus of the first horticulturalists/farmers in Central Europe were already evident during the earlier Neolithic Age, i.e., ca 5300 cal. BC, when the decoration of ceramic vessels with wide grooves changed into patterns with thinly engraved lines (e.g., Pavlů, Zápotocká 2013). In addition to decoration, other manifestations of the material culture were also transformed. A major characteristic of the early period between 5500 and 5300 cal. BC was the typical architecture of the long houses, which were built with fewer posts in the later periods with typical side grooves/ditches (Tichý 1960, Pavlů 1981, Stäuble 2005), while there was an absence of larger concentrations of buildings in a single location and a lack of separate burial grounds. However, it is questionable whether it is useful to continue to treat the initial stage of LBK as a monolithic block in a Neolithic Culture that was established uniformly (Neustupný 1956, Quitta 1960, Soudský 1954, Tichý 1960) although the documented artefactual materials exhibit substantial heterogeneity (Gronenborn 1999, Lüning *et al.* 1989, Modderman 1988).

The transformation from the earliest LBK into the following period, which is known as the classic LBK (5300–5100/5000 cal. BC; *Figure 1*), was already reflected more significantly during the earlier Neolithic period on the western border of the Oecumene and less markedly in Transdanubia, where a broad line technique for ceramic decoration was used for a much longer time until the period of the Želiezovce imports (e.g., Pavúk 2009). In terms of ongoing developments, this diverse cultural evolution continued widely. The transformation

of the entire complex of cultural elements and the substantial spatial extension of the "Neolithised" area in around 5300 cal. BC means that this is the exact period that represents the first real cultural change in the Neolithic period.

In Central Europe, the first half of the 5<sup>th</sup> millennium BC is represented by two major cultural complexes, which once again can be distinguished most easily by the decoration of ceramic vessels. The geographical boundaries between the two regions were approximately located in the Czech Republic (between Bohemia, North Moravia and South Moravia; e.g., Zápotocká 2007: 207) and between Upper and Lower Austria. The western circuit was dominated by pottery with imprinted decoration produced using various stroke techniques, whereas the south-eastern area was typified by polychrome painting. In terms of the other characteristic features of the material culture, at first glance the cultural complexes did not vary significantly, and clear differences could only be detected after a more detailed

regional comparison at a later stage and at a more regional level.

In addition to house types, another essential characteristic of Central European Neolithic settlements is the large number of pits of various shapes and sizes, as well as their fillings, which contain the largest volume of findings (artefacts and ecofacts). In the western circuit, such as the Stroked Pottery culture (SBK), people generally settled on former LBK sites, and thus a considerable number of pits are superimposed. The content of the pits is strongly intermixed, thereby forming a conglomeration of current artefacts and diachronic intrusions of various kinds (e.g., Pavlů, Zápotocká 2013, Link 2014 and Frirdich *et al.* in this volume). The nature and the condition of the findings in these pits is influenced by a wide range of deposition and post-deposition processes, the study of which should constitute an integral part of any modern analysis (e.g., Pavlů *et al.* 1986, Květina 2010, Stäuble, Wolfram 2012). The findings are somewhat different in the eastern area

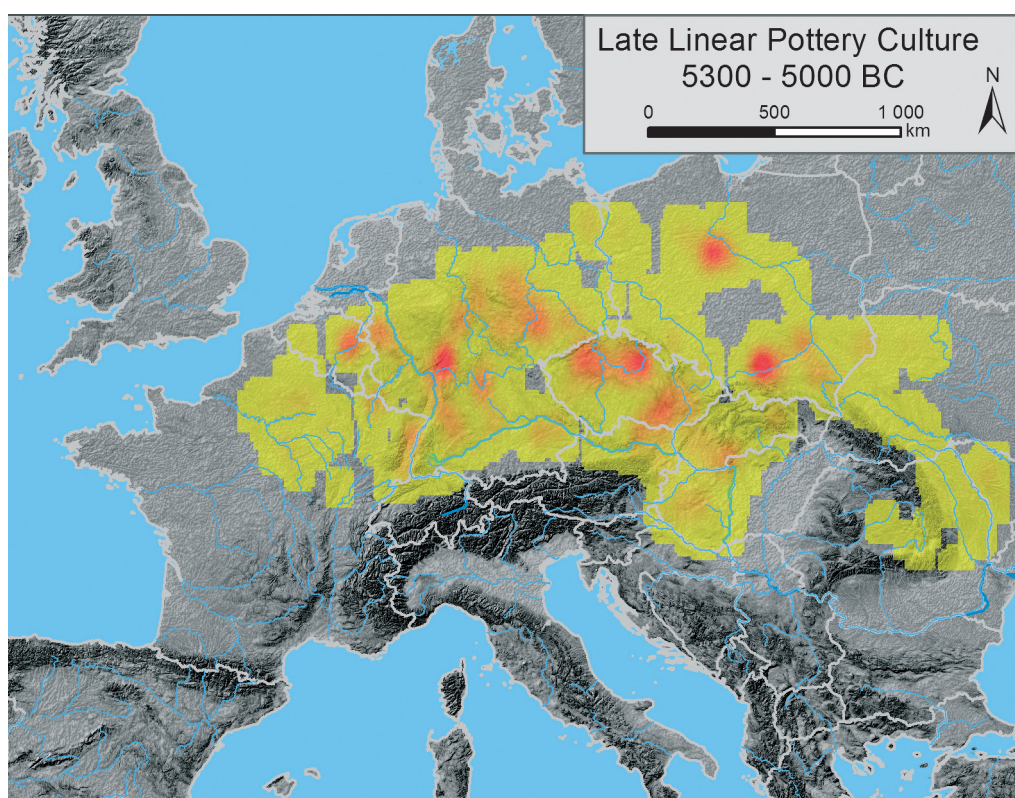


FIGURE 1. Overall spread of LBK during its classic chronological phase (ca 5300–5000 cal. BC). Red spots indicate higher density of sites. Map basis Earth Satellite Corporation® ESRI®.



of Europe, especially in the Slovak Republic and Lower Austria, where a number of the settlements belonging to the Lengyel cultural complex appeared in completely new locations after the turn of the millennium (e.g., Daim, Neubauer *Eds.* 2005: 103).

Since the 5<sup>th</sup> millennium, there were some regional differences in burial rites and in the incidence of major burial grounds. We know of more than a dozen cemeteries involving cremation, inhumation or combined burial rites from the Western circuit, whereas in South Moravia and Lower Austria we can only work with individual graves located in the areas of settlements (e.g., Lenneis *et al.* 1995: 93–99, Spatz 1999, Zápotocká 1998, Kaufmann, Kürbis 2002, Řídký 2011). However, unique, usually inhumation, burial places are common in specific regions of Slovakia and Western Hungary (e.g., as summarised by Demján 2012 and Demján in this volume).

The phenomenon of circular monumental architecture known as rondels (Kreisgrabenanlagen) was

common in both major cultural complexes (e.g., Literski, Nebelsick 2012: 435). These circular ditch complexes were built across most of Central Europe during a later stage of Neolithic (SBK/Lengyel) development in the 49<sup>th</sup> century cal. BC and they disappeared during the 45<sup>th</sup> century cal. BC (*Figure 2*). The existence of these structures probably indicates social processes during which the original household or longhouse communities were transformed into village communities with internal hierarchies (see Končelová, Květina or Burgert in this volume). Around the same time, the large-scale spread of certain types of raw materials occurred, e.g., Bavarian chert and Carpathian obsidian, as well as specific products such as marble bracelets and ceramic vessels (e.g., Pavlů, Zápotocká 2013, Petrasch 1998: 20–21, Trnka 2004, Zápotocká 2004, 1984, Binsteiner 2005). The transformation of the social structure of the population at that time is also demonstrated by the graves and burial sites. From the first half of the 5<sup>th</sup> millennium, the first clear signs are registered of a specific

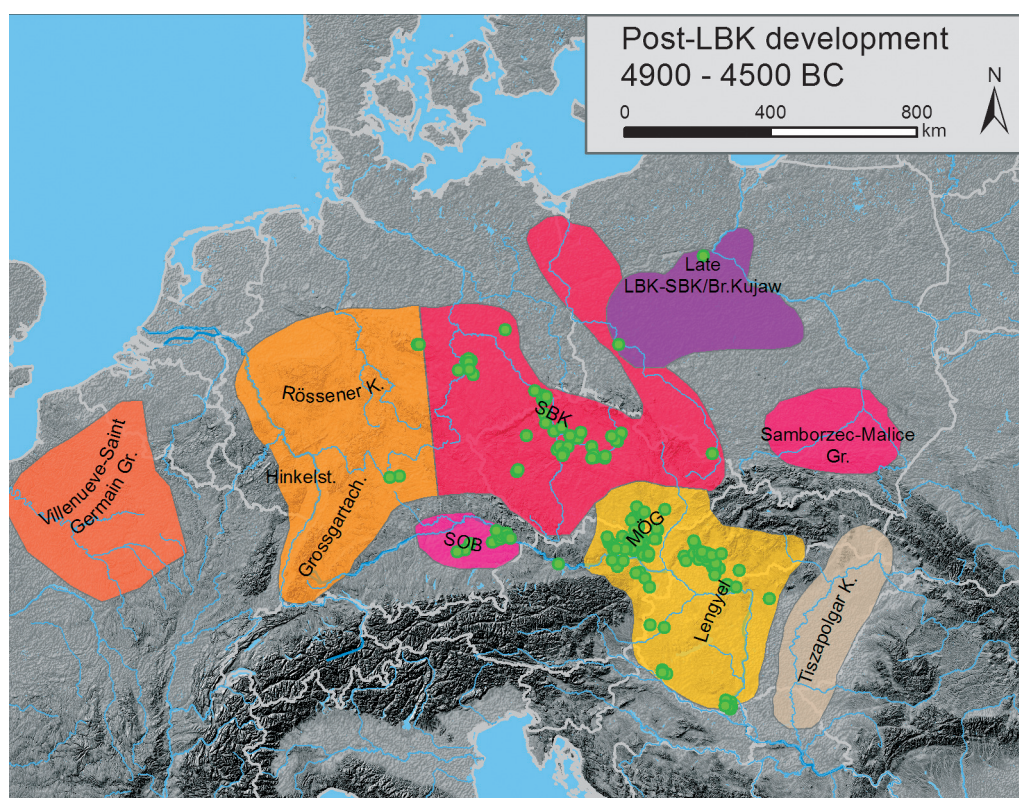


FIGURE 2. Spread of Post-LBK cultures and cultural groups (ca 4900–4500/4400 cal. BC). Green dots designate the distribution of rondels (Kreisgrabenanlagen). Map basis Earth Satellite Corporation® ESRI®.

stratification of funeral paraphernalia in the graves of men, women and children's (e.g., Demján 2012 and Demján in this volume).

## CONCLUSION AND ISSUE THEMES

In conclusion, the issue of the end of the 6<sup>th</sup> millennium and the first half of the 5<sup>th</sup> millennium cal. BC is associated with the decline of the LBK and another unusually dynamic development that occurred in the post-LBK horizon in Central Europe, which can be divided into the following three basic topics, which were also the three main thematic blocks of the EAA session in Pilsen during 2013.

- 1) Theoretical issues associated with the impetus of the cultural changes that occurred during the LBK and Post-LBK periods. Was it a rapid or long-term process? Was one region the core area for the changes or did a continuous process occur over a wider area? (See the articles by Gramsch, Link, or Riedhammer in this volume.)
- 2) The transformation of the spatial structure of settlements and the nature of the features of settlements. What can we say about the social complexity of the society? (See the articles by Končelová, Květina, Fridrich *et al.*, Vondrovský *et al.*, Blažková, Burgert, Peša, Demján in this volume.)
- 3) What was the remote distribution of artefacts and did supra-regional contacts exist? What do imports demonstrate? (See Scharl in this volume.)

Each of the topics defined above obviously merits more coverage. However, the aim of this session and the final order of the contributions is to comprehensively consider the issues related to the entire period, and thus a degree of generalisation cannot be avoided. Unfortunately, for various reasons, it has not been possible to collect all the spoken contributions and poster presentations, but a new author will compare and summarise the situation in Hungary (See Barna in this volume). Finally, in this introductory article, we would also like to mention some of the contributions that have not been converted into text in this volume (See the abstracts in Turek *Ed.* 2013: 223–228).

In the study conducted by D. Gronenborn and Ch. Lohr (*The Early to Middle Neolithic transition in western Central Europe*), the authors tried to calculate the size of the population that lived in the western part of Central Europe during the Neolithic period based on various methods. According to their results, following

a rapid increase towards the end of the LBK, there was a marked decline in the population, which was generally connected with a climate triggered crisis, as well as some examples of so-called massacres. These events led to the emergence of a new culture, i.e., the Hinkelstein culture in this geographical area.

F. Trampota presented a very unusual perspective regarding the archaeological cultural groups defined on the basis of the geographic distributions of differing ceramic styles (*Old School is not Dead. The People with Stroked Pottery in Moravia*). According to his concept, the various decorative and morphological ceramic designs found in the different geographical regions of Moravia in the first half of the 5<sup>th</sup> millennium BC may represent diverse social groups, rather than a purely chronological development in the evolutionist sense.

To some extent, an alternative view of the chronology of Bavarian Stroked pottery was introduced by F. Eibl (*More than just Ceramics. The Formation and Development of the Bavarian Group of Stroke-ornamented Pottery Culture*), where he considers that the local cultural group was a distinct group that developed from the LBK, which was influenced by various cultural features in the environment (for an additional perspective, we recommend the work of K. Riedhammer in this volume).

P. Šída offered his views concerning the changes within distribution systems during the LBK period and until the turn of the millennium (*Where just take the Stone? Changes of the Distribution of Lithic Raw Materials during the first half of the 5<sup>th</sup> Millennium BC*). Based on his research in the northern regions of Bohemia and his study of additional materials from settlements, the author pinpointed the mining of metabasites of the Jizerské Mountains type during the LBK period and their widespread distribution over long distances. An important factor is that the distribution systems employed by the chipped industry changed at the turn of the millennium when mostly local resources started to be utilised (for more details of distribution systems of the period, we recommend the study by S. Scharl in this volume).

The poster presented by a group of authors, i.e., I. Hohle, O. Mecking, S. Behrendt and S. Wolfram (*Changes in Ceramic Technology in the Early Neolithic – A Case Study from Eythra/Northwest Saxony, Germany*), was thematically isolated, but of no less importance than the other contributions, where it was based on the ceramic technology utilised at the Eythra site in Saxony. Striking differences in terms of the production technology and the composition of the ceramic mass

were recorded between the earliest LBK and the classic LBK, but especially between the LBK and the SBK pottery. Eythra is one of the rare sites where it is possible to compare ceramics from various Neolithic periods at a single location.

Within the session, the approaches towards the various topics and their interpretations of the data were quiet heterogeneous. Nevertheless, high-quality material was collected and numerous interpretations were formulated, which may be addressed subsequently in further research using archaeological sources, including those from outside Central Europe.

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