Houses of the Linear Pottery Culture: Orientation and use of landscape in cultural context. Case studies of the Great-Duchy of Luxembourg.

HAUZEUR Anne

National Museum of History and Art of Luxembourg - Section Prehistory - 241, rue de Luxembourg LU-8077 Bertrange - (Great-Duchy of Luxembourg)

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The detailed study of domestic units of the Linear Pottery Culture from the Great-Duchy of Luxembourg, enlarged to some sites of the western LPC, allowed to propose a cultural, even symbolic, interpretation of the houses' orientation. This interpretation is strengthened by the recent excavation of one settlement whose houses have been built prioritising the LPC traditional orientation rather than the spatial organisation of the domestic units, despite the ground constraints. Moreover this site is settled on an unusual topographic position, on a rock headland. It dominates an open landscape and could be the mark point of a cluster of settlements.

The Linear Pottery Culture (LPC) of the Middle Mosel is known for several decades (fig. 1), included the territory of the Great-Duchy of Luxembourg. For the latter, the knowledge is now more accurate with the recent extended excavations, undertaken in collaboration with the National Museum of History and Art of Luxembourg, the "Société Préhistorique Luxembourgeoise", and the Royal Belgian Institute of Natural Sciences, and their recent study (Hauzeur, 2003).

**Figure 1**

Clusters of sites of the Middle Mosel (bordered and hatched areas), and its neighbour regions. Hatches: Northwest LPC; Grid: Neckar LPC.
At the light of the actual data, available throughout two excavations' campaigns realised on two sites on plateau (Weiler-la-Tour - Holzdreisch, Jadin et al., 1991; Alzingen - Grossfeld, Jadin et al., 1992), one emergency excavation in the Mosel valley (Remerschen - Schengerwis; Hauzeur & Jadin, 1994), and one survey excavation done before the motorway-link with Saarland (Altwies - Op dem Boesch, Hauzeur & Jost, 2003), 24 house plans have been registered at a more or less well preserved state. Following the typology established by P. J. R. Moddermann (1970), they are distributed in 6 plans with tripartite internal division (long house, type 1), 7 plans with bipartite internal division (house, type 2), and 11 undetermined house plans.

A detailed exam of these house plans, with the addition of 47 other plans coming from the available data for the Middle Mosel valley (Bernkastel-Wittlisch country and Lorraine), allows to establish some architectural characteristics specific to the region (for full data and references see Hauzeur, 2003). When looking at the orientations a non-functional interpretation of these ones can be proposed amongst the Linear Pottery Culture, sustained by an example of one Luxembourg excavated site, Altwies. More it is located on a particular topographical position, which appears not corresponding to the traditional location for the Northwest LPC settlements[1].

1. Context

The four excavated sites are located in the Gutland area, which constitutes the southern part of Luxembourg, mainly on a sandstone substrate covered by limonous sediments. Their occupations are dated to the Recent/Late LPC (IIa-IIId of the Dohrn-Ihmig's chronology), mainly to the IIc-IIId. The greatest part of the siliceous lithic assemblages is imported from the flint outcrops of the Meuse area, and show numerous cycles of reuse. Splintered pieces and arrowheads points dominate. The latter are often asymmetrical or retouches on their left lateral edge. The ceramic decoration has elements in common with the Middle Rhine stylistic province, characterised by the increasing of the pivoting multiple teeth comb technique and the use of "empty" band in association with a secondary pattern. The ceramic materials give also evidence of affinities with the Leihgestern group, the Neckar valley, and very few with the North of the Northwest LPC and the Southwest LPC (defined by Jeunesse, 1995). Some rare decoration features are inspired by characteristic patterns from the Blicquy - Villeneuve-Saint-Germain culture or the Hinkelstein one. Few pots belong to the Limburg Ceramic and the "Begleitkeramik" illustrating relations with other contemporaneous groups and cultures.

2. Characteristics of the house plans amongs the western LPC

One settlement of the German Mosel (Maring-Noviant, Schmidgen-Hager, 1993) and 3 from Lorraine (Ay-sur-Moselle, Thomashauser, 1999; Ennery, Petitdidier et al., 2003; Montenach, Thévenin, 1983) revealed house-plans, but incomplete. Their data are partially included within the following considerations. Moreover most of the sites are not fully excavated.

It seems that the type 1 and 2 are both present at the beginning of the occupation of the Luxembourg territory, when the type 2 is only present at the final stage of the LPC like for the Netherlands Limburg (Moddermann, 1970: 112). A high proportion of rectangular houses dominate in the Middle Mosel area (53/71). This is a characteristic features of houses from the southern part of the Northwest LPC and the Neckar LPC, as well as Bavaria. The few plans which can be of a light trapezoidal form (1 at Altwies, and 2 at Ay-sur-Moselle) are attributed to the phases IIc-IIId. They could be the result of the exchanges coming from the North at the same time that the raw materials or a penetration of the neolithisation of the Paris
Basin in the Mosel valley by Lorraine (Hauzeur, in press). A majority of houses from Luxembourg shows a fondement trench at the rear. By this architectural trait, they are more closed to the Neckar LPC than the North of the North-western LPC.

The orientation of the long axe of the Luxembourg houses is included between 40° and 60° West like those of the German Mosel (Bernkastel-Wittlich and Trier areas) and corresponds to similar orientation for the houses of the Aldenhoven Plateau (fig. 2). Lorraine has a wider spectrum, more inclined to the west, like Belgian area, and even the Centre of the Paris Basin. In this case, the value for the declination doesn’t seem to be correlated to the different stylistic groups of the North-western LPC.

Figure 2
Orientation of the houses from the Middle Mosel (Luxembourg, Lorraine, Bernkastel-Wittlich), compared with orientations at Langweiler 8 and 9, and in Belgium (data from Löhr, 1991; Schmidgen-Hager, 1993; Jadin, 1999; Thomashausen, 1999; Hauzeur, 2003).

3. Orientation: A cultural choice?

Amongst the Northwest LPC, the most western orientations correspond to the regions located at the most west. The Mosel cluster is in that case more closed to Rhineland than the southern countries. The most diverse explanations have been proposed to justify the choice of a specific orientation for the LPC houses. The most frequent is the argument of an orientation of the longitudinal axe of the building following the major direction of the wind. But recently the argument of an orientation related to the coast line was submitted (Coudart, 1998: 88-89). Concerning this latter proposal, we can argue that there is no tangible element in the LPC way of life which attest for populations looking towards the sea. On the contrary, the river network could or might have played an important role. It has built special paths, and had a place in the economic and daily life. Without any kind of a proof, the Danube could be looked having a privileged status, o. a. in some underlying stories or myths of the LPC. The memory of roots would have been transmitted in the material culture by the way of the houses' orientation (fig. 3). This hypothesis meets
the cultural or cultual hypotheses evoked by E. Mattheußer (1991: 37-38) or more recently the same ideas developed by R. Bradley (2001).

Figure 3
Hypothesis of the convergence of the LPC houses orientation towards the Danube (background after Mattheußer, 1991 and Jeunesse, 1995, with added average orientation for Middle Mosel in circle).

Nevertheless these considerations must be taken as proposal knowing that there are no simple economic, social or cultural phenomena, and that they have been sustained only by what is remaining of a complex human behaviour.

4. An unusual place to settle during Early Neolithic: influence of the landscape and cultural choice of orientation at Altwies

At Altwies - Op dem Boesch (Southern Luxembourg) recent survey excavations of some 24,000 m² have revealed with surprise a LBK settlement installed in a particular position at the edge of a rock headland resulting from tectonic movements. One side is limited by an abrupt slope due to the Filsdorff fault, when a stream runs in a deep valley at the other side. In the country, the LBK sites normally put down roots on the lower fluvial terrace or on the slight hills of plateau's. Here the site is at the very end of the plateau, with an open large view going down to the Mosel valley - if no any dense bushes (fig. 4). It is also at the fringe of a cluster of settlements installed more in the centre of the plateau, at some 5-10 km NW. Excavations of these sites are however not enough extended to notice relations documented throughout the goods of the material culture.

Figure 4
Topographical location of the settlement of Altwies - Op dem Boesch (Luxembourg).
More the village is directly installed on the sandstone substrate, which is just covered by a thin layer of sediment. To counterbalance this difficulty to put the posts in the soil, the LBK people have built their houses in a secondary rock fault directed SSW-NNE and more filled up with sediments. The installation and the orientation of the fault gave to the village a street-like aspect and not a cluster one (fig. 5). Despite the substrate constraints they gave to their houses the good orientation, which is NW-SE. At the same time they abandoned the classical scheme of a domestic unit with its (long) lateral pits, to dig them in the line of the fault. To keep this scheme they would have built the dwelling and its pits following the direction of the fault. But it was not the case. So this special organisation lets think that the orientation has a more cultural weight than the spatial organisation of a domestic area, more especially as the orientation of the longitudinal axe of the house is not in relation with the wind, which is here mostly SW-NE.

Figure 5
Sketch of setting up domestic units at Altwies - Op dem Boesch in the secondary fault with sediment deposit. left: theoretical scheme with respect of the spatial organisation; right: real situation with respect of orientation.
It seems that this community has - up till now with no explanation - undertaken to settle in a not easy position. As it is installed directly on the sandstone substrate, we thought about extraction and distribution of this raw material to other settlements in the surrounding (used as mill or grinding stones), but no evidence was found during excavations. Even, there is a lack of this material and the corresponding implements in the lithic assemblage, may be due to a type of unsuitable raw material. But a taphonomic reason cannot be excluded as a factor of sandstone corrosion because this type of sandstone is rather soft.

This site could be point out as a limit of a cluster of other villages which are settled in the background plateau and/or could have offered a mark point in the landscape. It also provides arguments for a cultural choice of the orientation of the houses.

5. Conclusion

The characteristics established for the houses of the Middle Mosel area shows that the unity of a regional cluster doesn't form a closed whole, because identity elements overpass the limits of the different regional clusters. The hypothesis, summarised at the time by Chr. Jeunesse (1996: 119-121), that the supra-regional links are founded at the base upon relations induced notably by the raw material procurement is one of the possible explanation of the closed architectural analogy between the houses of the Great-Duchy of Luxembourg and the Middle Mosel, and those of the South of the western LPC. This analogy could also reveal the origin of a group, which preserved the traces of its roots throughout some elements of the material culture one can observe. The analysis of the architectural elements of a cluster shows the complexity of behaviours and choices made when building a house. The latter is a mixture as much of the carpenters' know-how as of ideological traditions, resulting of the identity expression of a culture, a group, or a cluster of villages.

References


This paper is a synthesis of a proposal about the origin of the houses orientation, presented at the 'XXVe colloque interrégional sur le Néolithique' at Orléans in 1999 (still in press) and another one about the unusual position of the settlement of Altwies.