Production and use: temper as a marker of domestic production: the case of two Middle Neolithic villages in Concise (VD, CH)

BURRI, Elena Maria Elisabeth

Abstract
Deux styles céramiques se côtoient dans les villages du Néolithique moyen de Concise. La répartition spatiale des styles et des types de dégraissant montre que la production de la céramique est domestique.

Reference


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Cover illustration (left): Late Roman glazed mortar found in Saint-Blaise excavations, possibly from northern Italy. [After C.A.T.H.M.A., Importations de céramiques communes méditerranéennes dans le midi de la Gaule (Ve - VIIe s.), in A cerâmica medieval no Mediterrâneo ocidental, 1991, Mertola, p. 39, fig. 28]

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PRODUCTION AND USE: TEMPER AS A MARKER OF DOMESTIC PRODUCTION
THE CASE OF TWO MIDDLE NEOLITHIC VILLAGES IN CONCISE (VD, CH)

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1. A SHORT PRESENTATION OF THE SETTLEMENT

The existence of the lake-side dwellings of Concise, on the northern shore of lake Neuchâtel, has been known since 1855, when work on the railway line resulted in the partial destruction of the site in the bay of Concise and the discovery of many prehistoric objects. Almost 150 years later, work on the « Rail 2000 » project between Yverdon and Neuchâtel necessitated the excavation of a large part of the lake-shore site, involving a surface of almost 4700 m². This excavation took place between November 1995 and February 2000 under the direction of C. Wolf, who was mandated by the cantonal archaeologist D. Weidmann.

At the end of the excavation, about 25 villages, including 7949 piles, dating from the Middle Neolithic to the Early Bronze Age, between 4300 BC and 1570 BC, had been brought to light. All the villages, apart from the earliest and those from the Horgen culture, produced an abundance of well stratified material precisely dated by dendrochronology1 (Winiger to be published, Winiger 2003). The strata were correlated by A. Winiger and dated using the horizontal timbers contained in the archaeological levels.

2. THE MIDDLE NEOLITHIC REMAINS AND THE POTTERY

The Middle Neolithic II is well represented with 6 villages, which are either superimposed or built at other locations within the bay of Concise, and dated between 3868 BC and 3516 BC. The pottery of three of the villages is consistent with the pottery styles of the region and period, being from the well known Cortaillod culture of the Swiss Plateau. The situation is however exceptional for three other villages, in which the NMB (Néolithique Moyen Bourguignon) and the Cortaillod styles coexist. We will focus particularly on two of these villages; the first one dendrochronologically dated to 3713-3675 BC, with two phases of rebuilding and the second one dated to 3645-3635 BC.

3. THE REGIONAL FRAMEWORK

During the Middle Neolithic we have the well known Cortaillod pottery which has been regularly found at lake-shore sites (Carnes 1997; Gauthier 1985; Hafner and Suter 2000; Kaenel 1976; Ramseyer 2000; Schifferdecker 1982; Schwab 1999; Seppey 1991; Stoeckli 1981a and b) on the Swiss Plateau (Fig. 1). It is mostly characterised by its pots with a S profile and knob handles situated near to the lip. Its evolution is also known, with the profile becoming progressively more closed and the proportion of pots in relation to that of dishes increasing from the Classic Cortaillod (approximately 3900-3750 BC) to the Cortaillod Port-Conty (approximately 3500-3350 BC), with the Middle and Late Cortaillod in between. The tempers in all cases include quartz from alpine pebbles or sand, and in some cases they also include broken shells (Fig. 2). It is also possible to use limestone from the Jura, but the only limestone tempers that exist on the Swiss Plateau belong to NMB style pottery and these are considered imports (Pétrequin 1984). They represent less than 30 pots for all the Cortaillod settlements of the Swiss Plateau, for which there are thousands of published pots (Burri in press).

The NMB is usually geographically separated from the Cortaillod (Fig. 1). It exists normally in Burgundy and Franche-Comté on the far side of the Jura. The style, which was defined at the time of the colloquium of Beffia (Pétrequin and Gallay, 1984), is characterized by pots with shoulders underlined by pairs of knob handles. The situation is a little different from that of the Cortaillod, because most of the sites are hilltop settlements or caves and not particularly well dated (Pétrequin and Gallay

1 – The dendrochronological studies and dates are supplied by the LRD (Laboratoire Romand de Dendrochronologie) at Moudon, Switzerland.
Production and use: temper as a marker of domestic production (1984; Lepage 1992; Dufay-Galan 1996; Liégard et al. 2000; Rialland 1991; Wernli 1995). The lake-shore dwellings of Clairvaux XIV, Clairvaux V La-Motte-aux-Magnins and, since this summer, Clairvaux VII, are the exceptions, but they are not dated by dendrochronology (Pétrequin and Pétrequin 1989; 2005; Templer 2006). The chronotypology is more difficult to establish, but we can suggest that it follows the evolution of the Cortaillod in that the proportions of pots in relation to that of the dishes increases as well, whilst the shoulder migrates down to the maximum diameter of the belly (Templer 2006). The tempers are limestone in most cases, sometimes with crushed shell. The only exception is the hilltop settlement of Moulin-Rouge where there are tempers including quartz, but representing only 24% of the tempers. One of the explanations for this situation is that the Rhône glacier did not cover the Jura, therefore there are no alpine moraines with quartz-bearing pebbles and the only granite massif of the region is the Massif de la Serre near Moulin-Rouge (Jaccottey et al. to be published). The fact that there are only a few pots containing crystal tempers at Moulin-Rouge would indicate that this is a cultural choice (Fig. 2).

We have seen all the pottery from Auvernier, Twann, Yverdon and Muntelier on the Swiss Plateau as well as the pottery from Clairvaux XIV, Clairvaux V La-Motte-aux-Magnins, and Montmorot in Franche-Comté, whilst P. Pétrequin has made determinations for all the pottery from Clairvaux VII, XIV and La-Motte-aux-Magnins, Montmorot and Moulin-Rouge (Pétrequin and Pétrequin 2005). As for Concise, we have made macroscopic determinations of the tempers and these determinations were considered sufficient because the limestone and the crystalline tempers are easy to differentiate. The limestone tempers are abundant, angular and well calibrated, they cannot scratch steel and some of the temper occasionally disappears during the firing of the pots. On the other hand, tempers which contain quartz-rich rocks are often badly

Fig. 1 – The regional framework of Concise and the establishment of the Cortaillod and the NMB cultures. 1. Concise (VD, CH), 2. Clairvaux (Jura, F), 3. Muntelier (FR, CH), 4. Twann (BE, CH), 5. Auvernier (NE, CH), 6. Yverdon (VD, CH), 7. Lavans-les-Dole-Moulin-Rouge (Jura, F), 8. Montmorot (Jura, F).
Production and use: temper as a marker of domestic production

3. E. BURRI

Production and use: temper as a marker of domestic production

E2: 3713-3675 BC
E4A: 3645-3635 BC

226 kg
215.3 kg

362 archaeological profiles
252 archaeological profiles

NMB style: 50%
NMB style: 51%

Cortaillod style: 48%
Cortaillod style: 46%

Limestone tempers: 13%
Limestone tempers: 9%

sorted, less abundant and round; they can also scratch steel and they withstand the firing process very well. We can observe the presence of crushed shell fragments, which may or may not be fossil, because they are often larger than the rest of the temper.

At Concise, it is notable that the two traditions, NMB and Cortaillod, coexisted in at least three villages. One of these, dated between 3570 BC and 3517 BC is strongly eroded and cannot be observed from a planimetric point of view. By contrast, the two others, as well as their pottery, are very well preserved.

4. ZOOM ON TWO VILLAGES OF CONCISE

We will now discuss only the case of the two well preserved villages in which the two pottery styles coexist: the first one dated between 3713 BC and 3675 BC (E2) with two rebuilding phases, and the second one between 3645 BC and 3635 BC (E4A). The assemblage is presented in Fig. 3.

From the village dating from 3713-3675 BC, we see that more than half of the corpus is NMB and that the total number of NMB forms is substantially greater than that which previously existed on all of the Swiss Plateau. For the tempers, the situation is more normal. This demonstrates that most of the “NMB” pots are not imported from Franche-Comté but are rather manufactured in or near Concise. For the second village, the contrast between the style of ceramics and the composition of tempers is more striking. Almost all the pots are manufactured locally.

Apart from the tempers and the hybrid forms, none of the pottery shapes are exceptional from either village, with styles from the normal Cortaillod and NMB typochronologies. What is remarkable is the coexistence and production of both styles in the same village.

<table>
<thead>
<tr>
<th>E2: 3713-3675 BC</th>
<th>E4A: 3645-3635 BC</th>
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Fig. 3 – The corpus of pottery from the two villages of Concise.
5. THE PLANS OF THE VILLAGES

We carried out a spatial analysis to continue the interpretation. The first stage was to create the plans of both villages and in particular the layout of the houses and rubbish dumps, with a view to assigning the pottery to individual houses. It was not a simple matter, despite the piles, the dendrochronology, and the excellent stratification. Many piles are not dated, there are many postholes and the superimposition of the villages makes for difficult interpretation of architectural structures (Winiger to be published). We therefore had to find an alternative way to reconstruct the layout of the lake-shore dwellings, which could be compared to the architectural plan. To achieve this, we applied a method based on the ethnoarchaeological model of A.-M. and P. Pétrequin (1984). We will not enter into the details of this reconstruction, which we have described elsewhere (Burri to be published). All we need to know at this stage is that such a reconstruction was possible and that the comparison between our model and the plans proposed by A. Winiger are very convincing (Winiger to be published). We need to stress that our proposals do not come from the layout of the houses, but are plans of the consumption units reconstructed, based on the distribution of the pottery. The final plans will only become available after the integration of the other results, particularly those relating to the architectural structures.

*Fig. 4 – The distribution of tempers and styles in the village E2 dated 3713-3675 BC.*
6. SPATIAL DISTRIBUTION OF THE POTTERY AND ITS IMPLICATIONS

We will now discuss the distribution of tempers and styles in the villages and between the houses. We have observed that there are obvious groups of tempers which create quarters within each village, but that the styles are equally distributed throughout the villages (Fig. 4 and 5). When we analyse the distribution between the individual houses, we can attribute one or two sorts of temper to each house. The same is true for the styles, with each house having its own style, whether it be Cortaillod or NMB. Just as the distribution of the two parameters is very different between the houses, when the two parameters are combined, it appears that virtually every house has a different combination of temper/style. This implies that the pottery used in each house is also produced there; there is no common workshop nor are there potters who make the pottery for all the village. We can summarise by stating that “the consumption units are production units”, or in other words, “the production of pottery is a domestic activity”. On the other hand, the collection of the raw materials can be common to some neighbouring houses.

*Fig. 5 – The distribution of tempers and styles in the village E4A dated 3645-3635 BC.*
7. CONCLUSIONS AND PROSPECTS

As we have seen, the exceptional coexistence of two styles of pottery in lake-shore villages at Concise contributes to the understanding of socio-economic facts. The excellent preservation of these settlements, the extensive excavations and the possibility of precisely dating the strata by dendrochronology allow for planimetric studies. To these planimetric studies we have added an ethnoarchaeological interpretation of the material distribution and of the archaeological observations. In these cases, very simple observations, namely the composition of tempers, can be sufficient to reach interesting conclusions, such as the fact that the production of pottery was most likely a domestic activity and that there were quarters of the village that grouped together for the supply of tempers.

The next stage for us will be to try to ascertain who were the manufacturers and the consumers of this pottery and what were the dynamics of the populations who lived at Concise (Burri 2005; Burri to be published). This discussion can only take place once the spatial distribution of technical and stylistic data is understood within the village as well as within a wider regional context and it will also be interesting to have information regarding the manufacturing techniques of the pottery. At a later stage the discussion will be expanded to include ethnoarchaeological data regarding the relationships between pottery styles and population. In the case of Concise and based on this ethnoarchaeological approach, we can assume that at least some of the potters came from elsewhere in the Jura. As for the rest of the population, we need to compare the distribution of the others artefacts with that of the pottery in the individual houses to reach any form of conclusions.

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