Persistent traditions: a long-term perspective on communities in the process of Neolithisation in the Lower Rhine Area (5500-2500 cal BC)

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Chapter 1

From Hardinxveld to Noordhoorn and beyond

1.1 Introduction

On the morning of November 7th 1997 the skeletal remains of an elderly woman were found at the waterlogged site of Hardinxveld-Giessendam Polderweg. The remains were dated to the Late Mesolithic (5738-5588 cal BC), making her the oldest known inhumation burial in the Netherlands at the time. The woman, affectionately named 'Trijntje', was buried on her back and had no burial gifts except for a few specks of ochre. At some distance from the elderly woman was a second, severely disturbed interment of an adult person and three dog burials, two of which were disturbed, as well as some 80 isolated finds of human bone. The evidence provided by the skeletal material indicated the former presence of men, women and children (Louwe Kooijmans 2001[a]; Smits/Louwe Kooijmans 2001).

The woman was likely a member of a small community inhabiting a Late Glacial dune or 'donk'. The donk must have been a focal point, a dry home for this community in a vast wetland consisting of lakes, watercourses and swamps. The faunal material at the site provides evidence of an extensive range of (subsistence) activities such as hunting, fishing, fowling and trapping, while botanical remains attested to gathering. This picture was complemented not only through lithic evidence, but especially through the recovery of artefacts of bone, antler and wood like axes, adzes, awls, chisels, sleeves, bows, paddle blades, and, at the nearby twin site of De Bruin, a fish-weir and a complete dug-out canoe. The unparalleled artefactual, faunal and botanical evidence as well as the formal burials and the considerable number of features, including the remains of sunken dwellings, argue for an interpretation of the site as a winter base camp for a group of hunter-gatherers. The artefacts also showed that the community was not an isolated band in a temperate wilderness, but was part of a larger community, with material contacts stretching to South-Limburg and the Ardennes and maintaining relations, either directly or indirectly, with the first farmers of the Bandkeramik culture (Louwe Kooijmans 2003).

Both Polderweg and nearby De Bruin yielded a wealth of information concerning these sites' use, the spectrum of activities carried out there and their wider social and cultural networks, thanks to the unique preservation conditions and the rich artefactual, structural and ecological remains. This enabled researchers in the Lower Rhine Area (LRA) to transcend for the first time the rather restricted record of this period predominantly made up of numerous flint scatters (see Deeben/Van Gijn 2005; Louwe Kooijmans 1993[b]; 2001[a]; Verhart 2000), and gain greater insight into the variety of Late Mesolithic life, allowing us to appreciate its distinct identity more fully. In a way, one could say these sites are

the region's answer to such renowned sites as Starr Carr (Clark 1954) and Friesack 4 (Gramsch/Kloss 1989), as well as the rich Danish Mesolithic as a whole, which has been regularly held up as a role model for this region (Louwe Kooijmans 1999; 2001[a]; Verhart 2000).

From Hardinxveld to Noordhoorn

Of equal importance to the perspective both Hardinxveld sites offer regarding the Mesolithic communities in the LRA is their position in the process of Neolithisation. At Polderweg the intriguing discovery was made of an LBK-type arrowhead dating from phase 1, synchronous with, or predating, the earliest LBK occupation in southern Limburg and indicative of contacts with these early farming communities. Several centuries later, around 5000 cal BC, the first locally made pottery appears at the site, marking the start of the Swifterbant culture. Finally, the locality of De Bruin yielded the first evidence of animal husbandry by these communities, in the form of a limited number of bones of domestic animals – cattle, pig, sheep and goat – that were brought to the site (Louwe Kooijmans 2007[a], 296-297). These discoveries form important material and economic markers in the process of Neolithisation that allow the documentation of the early phase of the transition to agriculture in this area. Another such discovery was made nearby.

Almost six years later and 50 km to the west another skeleton was discovered, this time of an adult man. He was lying in a contracted position. In his right hand he held a grave gift: a piece of pyrite and three strike-a-lights. The grave was discovered during the excavation of the Middle Neolithic wetland site of Schipluiden-Noordhoorn and was part of a small burial ground, consisting of three graves and four individuals. The site was located on a slight elevation formed by a low dune and must have been one of the higher places in the surrounding vast salt marsh landscape. Due to comparable favourable find circumstances as at Hardinxveld, Schipluiden also yielded a lot of information about its habitation dated to approximately 3700 cal BC, and attributed to the Neolithic Hazendonk group. Some 4600 features were uncovered at the site, including postholes of numerous residential structures, wells, pits, hearthpits and an enclosing fence.

The people at Schipluiden, unlike their predecessors at Hardinxveld, herded cattle on the surrounding salt marsh as attested by the faunal remains. Botanical evidence also indicates the presence of locally grown cereals. The lithic material yielded many axe fragments and illustrates the wide range of existing contacts needed to acquire the variety of raw materials documented. Although hunting, fishing and gathering still constituted an important share of daily practice, as is attested by various artefacts such as bows and paddles as well as faunal remains and stable isotope analysis (Louwe Kooijmans 2006[a]; Smits/Van der Plicht 2009; Smits *et al.* 2010), these new practices formed distinct additions to the spectrum of activities. Because of the vast quantities of material unearthed at Schipluiden, it is a key site for understanding the development of the Neolithic in this region, as the evidence in its entirety indicates not only a distinct agricultural component, but also that the site was occupied permanently. Both agriculture and sedentism are perceived as important and oft-associated characteristics of Neolithic communities (*e.g.* Bogucki 1999; Rowley-Conwy 2004).

A paradox of change?

The introduction of these sites illustrates a development and accentuates a seeming contrast between both time frames and the communities involved, regarding the transition from hunter-gatherer societies to farmers in LRA.[1] In this respect the sites of Hardinxveld-Giessendam and Schipluiden-Noordhoorn belong to apparently very different stages in this process. The community at Hardinxveld formed a small band that seasonally inhabited a dune in a vast wetland area. These people were the heirs of communities that had been characterized by mobility and a hunter-gatherer mode of subsistence for millennia, eventually dating back to the reindeer hunters of the Magdalenian and Hamburgian age (Clark 1977; Deeben/Arts 2005; Gamble 1986[a,b]; Louwe Kooijmans 1993[a]). The members of the Schipluiden community, on the other hand, appear to have been part of something new; they tended herds of cattle, grew domesticated plants and their home was permanent and distinctly marked by a surrounding fence. This points to new cultural facets such as production, ownership, territory and the shaping of the land, that can be considered 'alien' to temperate post-glacial Europe. They ultimately largely derive from the by then roughly 6000-year-old Near-Eastern development of agriculture (Bogucki 1988, Louwe Kooijmans 1993[b]; 1998[b]; Thorpe 1996; Whittle 1999).[2]

However, as much as they belong to very different periods in time, both Hardinxveld and Noordhoorn are also essentially part of one and the same: a cultural succession of related indigenous communities caught up in a regional process of Neolithisation. As such the Hardinxveld band, as well as forming the last embers of a hunter-gatherer way of life, also stood on the threshold of something new, while Schipluiden-Noordhoorn in many ways forms a testimony to the way these new elements became incorporated.

1.2 Research aims: point of departure

The two key sites introduced above serve to indicate the position of this study in the wider debate on the Mesolithic and Neolithic and illustrate its main objective:

To better understand the process of Neolithisation in the Lower Rhine Area through a specification of the long-term socio-ideological characteristics of the indigenous communities involved.

The emphasis is on the continuity of the traditions of originally hunter-gatherer communities in the trajectory of introduction and incorporation of 'Neolithic' elements. It stresses the notion that the study of their relations with the very special and dynamic landscape they lived in may result in an increased understanding of their role in the period and process investigated. The position of this study in the debate on Neolithisation is, as such, in essence a native view on the offer of the new farming communities.

At the same time the importance of the developments taking place cannot be studied in isolation from the larger issue of the transition to agriculture, which ultimately classifies as one of the important steps in the history of mankind (see Chapter 2). For the studied area and period the most influential models of the past decades has been the in essence descriptive 'availability model' originally developed by Zvelebil and Rowley-Conwy (1984; also see Zvelebil 1986[a]; 1998[a]).

While the heuristic aspects of this model will be discussed in detail in Chapter 3, it serves as a point of departure here.

The availability model subdivides the transition to agriculture into three stages, termed availability, substitution and consolidation based on the relative contribution of domesticates and cultigens to the diet. This means that the economic shift from hunting and gathering to food production takes centre stage in the discussion on the transition to agriculture and is seen as the prime marker for the process of Neolithisation (see Zvelebil/Lillie 2000). However, a Neolithic way of life in essence comprises much more than an economic development. It potentially includes fundamental social changes and an altogether different world view.

Without denying the importance of this economic aspect, this study aims to demonstrate that an increased understanding of the process of Neolithisation in the LRA may ultimately derive from altogether different aspects of the communities involved, in particular those of a socio-ideological nature. These provide an additional, perspective to current models on the transition to agriculture in the LRA.

This study embraces archaeological as well as anthropological and theoretical approaches to underline the importance of non-economic aspects and to demonstrate the importance of the socio-ideological identity and associated practices of the communities involved in shaping the process of Neolithisation in this area. At the end of this thesis a number of general notions resulting from this approach will be presented in a reconsideration of the availability model.

Research context and perspective

The scope of this research covers the successive communities caught up in the indigenous process of Neolithisation in the Lower Rhine Area. Chronologically this involves the cultural succession of Late Mesolithic, Swifterbant culture, Hazendonk group and Vlaardingen culture between *c.* 5500 and 2500 cal BC. Geographically this roughly concerns the wetlands and wetland margin areas between the rivers Scheldt and Elbe.

The process of Neolithisation in this area can be characterized as a long-term and gradual incorporation of material elements, domesticates and cultigens, and at last the adoption of sedentism (*e.g.* Louwe Kooijmans 1998[a]; 2007[a]). Although interpretations regarding the time span of this transition differ (see Raemaekers 2003), its gradual nature remains undisputed and contrasts with contemporaneous developments in Scandinavia and Great Britain (see Hartz *et al.* 2007; Larsson 2007[c]; Rowley-Conwy 2004; see also Sørensen/Karg 2012). It also implies a different involvement of the indigenous communities living in the LRA (*e.g.* Raemaekers 1999, 191).

The general outline of the trajectory of Neolithisation in the LRA has, over the past two decades, developed into a robust framework, both through regular synthetic overviews and empirically based interpretations, as well as through the publication of new highly informative sites (*e.g.* Ten Anscher 2012; Koot *et al.* 2008; Louwe Kooijmans 1993[a,b]; 1998[a,b]; 2003; 2006[a]; 2007[a]; Out 2009; ; Peeters 2007; Raemaekers 1999; 2003; De Roever 2004; Vanmontfort 2007; Verhart 2000; 2012; also see below). At the same time much is still unknown regarding the introduction and adoption of these new Neolithic elements. This involves questions such as the actual economic contribution of domesticates and cultigens,

the role of the communities on the coversand landscapes in between the wetlands and the (earlier) loess-based LBK occupation, and our limited information on some time trajectories, such as those between Hardinxveld and Swifterbant (4700-4400 cal BC) and before the Hazendonk group (4000-3700 cal BC; see also Vanmontfort 2007).

Despite these challenges, the goal of this thesis is not primarily to expand our documentation of these or similar characteristics of the transition to agriculture - at least not directly. Instead the aim of this study is to resolve our understanding of Neolithisation through a study of its regional repercussions. In other words the focus is on the indigenous communities involved, rather than the transition taking place and following from that; the emphasis is on persistency of tradition, rather than change and development; on people, rather than process.

An additional aspect of this study is that it is a literature-based synthesis, offering a limited potential for adding new data, but favouring compiling and reviewing. Primarily and essentially, however, it is a matter of perspective. It is precisely the focus on the characteristics, identity and role of the indigenous communities by which this study hopes to offer an alternative perspective to approaches focussing on trajectories of change and to contribute to a more balanced understanding of Neolithisation in this area.

Research questions

In adopting this approach a number of central research themes can be formulated. The main question focuses on the indigenous communities involved in the transition to agriculture in the study area. It concerns seeking a better understanding of how the characteristics of the successive groups between the Late Mesolithic and Vlaardingen culture may be defined over time and in relation to their landscape and environmental context. The research will then examine how the formulation of long-term common values, or in effect group identity or *mentalité*, may help define the role and position of these communities in the process of Neolithisation and, as such, their influence on the 'dimensions' of the transition to agriculture in this area. In relation to this three related central themes were defined.

- Mesolithic roots. The first theme deals with the Mesolithic roots of the communities involved. This is meant both in a chronological and a relational sense. The Late Mesolithic period comprises the communities preceding and experiencing the initial interaction with farming communities. Their diversity across the LRA meant an equally diverse 'substrate' for the Neolithisation process. The relational aspect focuses on the persistence of values and associated behaviour derived from the hunter-gatherer roots of these communities and the extent to which they influence the various processes of acculturation taking place (see Barnard 2007).
- Landscape and environment. The second theme examines the recursive interaction between communities and their (physical) environment. This includes both the landscape as substrate and its associated environmental dynamics as well as, in this case in particular, the relationship between the Late Mesolithic to Vlaardingen culture groups, present in the wetland and wetland margin landscape to these. From an interpretative perspective, this

not only involves aspects of a measurable physical-ecological relationship, but essentially constitutes an attempt to define landscape perception (*cf.* Ingold 2000). It is therefore also a phenomenological approach.

- Neolithic axioms. The third theme questions and reinterprets the position of Neolithic markers and the contribution and role of material and economic aspects of the transition to agriculture in relation to the data available in the study area. This involves the extent to which current models of Neolithisation are supported by the archaeological record, how the incorporation of new Neolithic elements may be understood from an emic perspective and to what extent processes of change and incorporation of aspects of an agricultural existence altered the characteristics of the studied communities. This, importantly, is a theoretical discussion regarding stresses and emphases placed in discussing the broad topic of Neolithisation.

The three themes are not treated separately but recur repeatedly throughout this thesis. The underlying thrust of this study (see also Chapter 6), emphasises the relational qualities of community behaviour (and perception) and environment over time and in relation to both issues of identity and Neolithisation.

1.3 Research area and dataset

The study operates on two geographical levels. It deals with the process of Neolithisation in the Lower Rhine Area. This area may be defined as the western part of the North European plain bordered by the Belgian and German mountain ranges of the Ardennes and the Eifel respectively, and by the North Sea (see Chapter 3). It encompasses the loess soils in the southern part of the Netherlands and adjacent territory, characterized by the occupation of Neolithic Bandkeramik (LBK) farmers from 5300 cal BC, the coversand areas north of that and the wetland areas north and west of these. The emphasis in this study is on this latter part, in particular the wetland and wetland margin areas of the Western and Central Netherlands (the coastal, intracoastal and fluviatile region) which form a rough triangle with its apex in the eastern riverine area. Chronologically the study centres on the period between 6000 and 2500 cal BC, including the Late Mesolithic up to and including the Late Neolithic A period (*cf.* Van den Broeke *et al.* 2005).[3] The emphasis within the scope of this work, however, distinctly lies on the Late Mesolithic, Swifterbant culture, Hazendonk group and Vlaardingen culture communities. The contextualisation and implications of this must take shape within the wider framework of developments taking place during the transition to agriculture in the LRA and northwestern Europe in general.

Site-based perspective

A dataset has been created (Appendix I) with site descriptions with respect to the time frame and studied area. It comprises some 58 sites with relevant information, as well as 93 sites that provide some additional information. These sites form the backbone of the analysed data. As such, this study does not primarily take a landscape approach in the classical sense of a regional occupation history established through the reconstruction of detailed settlement systems, including sites and off-site phenomena (see Darvill 1997; Donahue 2006; Topping 1997). The available

informative sites simply do not allow such a reconstruction in most areas. Instead the research perspective is primarily that of a comparative study of the long-term characteristics of sites in relation to the dynamics of landscape and environment, with the purpose of increasing our understanding of the characteristics of the communities involved. As such, an important part of this study aims to yield a perspective on the integrated and recursive relationship between communities and their surroundings. Such a people-place-perception perspective ties in with the theoretical relational approach of an archaeology of inhabitation mentioned above (also see Brück/Goodman 1999[a,b]; Casey 1996; Geertz 1996; Pollard 1999; Thomas 2000; 2001). This scope also entails that the range of archaeological proxies is wide, including material, economic and behavioural information.

The study is largely based on an analysis of the available literature. This self-evidently gives rise to shortcomings that mainly relate to the quality of the available publications and the associated excavations and importantly, different systems of recording. In particular 'old' research based on different standards, many preliminary publications and the standardised reports generated by recent commercial archaeology quantitatively form one end of the spectrum, while a limited number of other, site-based publications, also mostly deriving from CRM archaeology, form the opposite, highly qualitative, end. In spite of the difficulties in a comparative analysis, all evidence is needed for an understanding of the studied communities.

1.4 Structure and methodology: a road map

This research covers a long time period and a large area. A number of archaeological as well as theoretical elements contribute to the main research aim as discussed above and structure the argument along the way. Four different parts may be distinguished. In order to elucidate their role and position in this text a brief 'road map' is provided.

Part I: context and background

The first part situates this study in the context of the recent debate on the transition to agriculture and introduces the strengths and weaknesses of the Lower Rhine Area dataset for the period studied.

- Chapter 2 starts with an historical perspective of the wider Neolithisation debate and the position of this study.
- This is followed in Chapter 3 by a more detailed introduction regarding Neolithisation in the Lower Rhine Area, a qualification of several interpretative biases and a definition of the theoretical and analytical scope of this study
- Chapter 4 deals with the quantitative and qualitative aspects of the dataset in relation to geographical, taphonomic and methodological factors, including a reflection on the values of the qualitatively highly informative wetland dataset.

Part II: the Late Mesolithic prelude

The second part provides a context for the process of Neolithisation in the LRA and the role of the indigenous communities.

- Chapter 5 is directed at detecting differences and similarities in the occupation practices of the communities of the hunter-gatherer substrate, as the basis of hypotheses on their influences on the process of Neolithisation. For this purpose a varied set of topics, including settlement location choice and site structure as well as technological, typological and raw material characteristics of the lithic assemblages is examined in a comparative study of excavated Late Mesolithic sites from different geographical contexts.

Part III: the Neolithisation of the wetland communities

The third part focuses on the special case of the transformation of the indigenous wetland communities during the process of Neolithisation.

- As a first step Chapter 6 provides a theoretical basis for the relationship of these communities with and their perception of the environment.
- This phenomenological perspective is applied in Chapter 7 to the archaeological evidence. The focus is on the long-term characteristics of occupation and the choices made by the communities involved in relation to Neolithisation. This allows a reinterpretation of the way in which communities negotiated Neolithisation, an agricultural existence included.
- On that basis Chapter 8 at last offers a new view on the developments of the settlement system over time and a further specification of the very extended and gradual nature of the Neolithisation process among these communities with their - as is argued – specific wetland identity and *mentalité*.

Part IV: synthesis and concluding thoughts

The different elements studied in this thesis are combined in the final part.

- A synthesis is presented in Chapter 9. It recapitulates the main ideas presented and draws out aspects of long-term continuity in the community-environment relationship in light of the process of Neolithisation.
- Chapter 10 forms an epilogue and advances a reconsideration of the availability model from the perspective advocated in this study.

1.5 Background

This study is part of the research project 'The Malta Harvest: From Hardinxveld to Noordhoorn- from forager to farmer'. The project was funded by the Netherlands Organisation for Scientific Research (NWO) and situated at the Faculty of Archaeology, Leiden University. While this study focuses on the questions and implications of 'from forager to farmer', it importantly draws on 'from Hardinxveld to Noordhoorn' and the wider set of sites attributed to the Malta harvest. This finds its origins in the Malta Convention (1992), aimed at protecting European archaeological heritage and regulating excavation and research.[4] The preliminary implementation of the treaty in the Netherlands and its ratification (2011) eventuated in a partially commercial heritage and excavation framework and led to an increase in commercially tendered projects, both of small to moderate scale as well as a small number of high-quality, large-scale infrastructural projects.[5] As

a result of this growing corpus of 'Malta sites', new data regarding the process of Neolithisation has come to light in a relatively brief period. The aim of this project is to synthesize these new results in relation to data yielded by sites excavated earlier and provide a new context for studying the period of the transition to agriculture in the Lower Rhine Area.

Notes

1 The terms hunter-gatherer and forager will be used indiscriminately in this study. However, the term forager probably does more justice to the societies in question because it is a more economic expression and does not suggest a prevailing importance of hunting (Lee 1968, 44). For a discussion on this subject, see *e.g.* Shott 1992, 864, note 1.

2 Most scholars agree that domesticates, crops as well as animals, must have been introduced to these communities by the successors of the Linear Bandkeramik Culture that arrived in the Lower Rhine Basin around 5350 BC and effectively established the first or 'primary' Neolithic in the region (Bogucki 1988; 2000; Louwe Kooijmans 2001[a]; Van de Velde/Bakels 2002) The 'primacy' of the Linear Bandkeramik Culture, *i.e.* being the first Neolithic culture in the region, is the topic of much debate. The role of the rather elusive La Hoguette and Limburg pottery is especially important in this respect. La Hoguette pottery might even predate the Bandkeramik occupation in the Lower Rhine Basin since it is not often found in association with it (Brounen/De Jong 1988; Van Berg 1990; Constantin 2002; Jeunesse 2001; Louwe Kooijmans 1993[a]; Modderman 1987; Raemaekers 1999, however, also see Brounen/Vromen 1990 and Brounen/Hauzeur 2010). Nevertheless the impact of the LBK arrival and the impetus it gave to setting in motion the process of Neolithisation can hardly be underestimated.

3 This involves the Late Mesolithic communities as well as contemporary and subsequent Neolithic cultures and groups. It includes both the LBK and its successors on the loess and coversands and the indigenous development of the Late Mesolithic in the wetland and wetland margin area north and west of these.

4 At the Malta Convention (1992) several European nations, including the Netherlands, signed the treaty of Valetta. This treaty regulates European archaeological heritage management and is based on the concept of *in-situ* preservation. If this is not possible the disturbing party in principle has to pay for excavation. Another spearhead of the treaty is to make archaeology a priority within town and country planning. The Dutch law-bill for implementing Malta was approved by the house of parliament in 2006) and was ratified in 2011.

5 Examples of large-scale projects are the Betuweroute and HSL-projects (railroad connections), the Maaswerken (flood-control and environment), several highways (for example the A27) as well as numerous smaller projects. For the period under consideration here several medium to large-scale excavations have taken place, such as A27-Hoge Vaart (Hogestijn/Peeters, 2001), Hardinxveld-Giessendam-Polderweg and De Bruin (Louwe Kooijmans 2001[a,b]), Wateringen IV (Raemaekers *et al.* 1997), Ypenburg (Koot *et al.* 2008), Urk-E4 (Peters/Peeters 2001) and Schipluiden-Harnaschpolder (Louwe Kooijmans 2006[a]). While the quantitative addition of new discoveries is tantalizing there are at least two fundamental qualitative aspects that should be mentioned. First of all Malta-inspired contractual archaeology mostly funds excavation and documentation of sites yet rarely any subsequent research. This means excavated sites end up in so-called 'standard-reports' mainly focusing on the documentary aspects of the excavation itself. In addition, these reports are often of variable quality, not in the least since their initial conception was not born out of research-questions. Secondly, in times when the market finds itself economically distressed, as it is presently, competition between the different commercial parties may lead to pricing in the tendering project that seriously undermines the quality of the work and consequently the safeguarding of our cultural heritage. As of yet the governmental and regulatory aspects of the commercial system lack the means to properly act upon this.