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Lithics and Personhood in the Lateglacial of north west Europe

by

Fotini Kofidou

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ABSTRACT

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LITHICS AND PERSONHOOD IN THE LATEGLACIAL OF NORTH WEST EUROPE

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This thesis examines aspects of human personhood as expressed through lithic artefacts in north west Europe during the Lateglacial. The research sites are Hengistbury Head in Britain, Rekem in Belgium and a cluster of sites in the Neuwied Basin, in Central Rhineland. The case studies cover the period of the Lateglacial Interstadial complex, about 15,500 -13,000 cal years BP.

The work aims at exploring the social practice of creating hunter-gatherer personhood in given social, temporal, spatial and material contexts. The discussion centres on the social and embodied nature of lithic technology as a means of negotiating the human person. In doing so, this study situates the discourse of the reciprocal and mutually constructing relationship between humans and objects at the core level of the individual.

Placed within social archaeological theory, the research adopts an outlook of social practice as an active manner of involvement. Relational entanglements between humans and things can accumulate or enchain the physical and metaphorical resources of the world, consequently leading to stasis or transformation. Therefore this thesis demonstrates that continuity and change in the archaeological record are associated with expressions of self ontologies. Further, the work suggests that, in order to comprehend this material variability, it would be helpful to consider the Lateglacial as a dynamic process of hybrid engagements instead of a fixed chronological and cultural unit.

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CHAPTER ONE

Introduction

1.1 RESEARCH AIMS, QUESTIONS AND OBJECTIVES

The study of past human personhood is now a central concern in archaeological theory. While such studies have provided information for other periods of prehistory (Fowler 2001, 2002; Brück 2006; Kirk 2006; Jones 2005; Whittle 2003; Chapman 2000; Thomas et al. 2009), the Palaeolithic seems relatively untouched. This thesis aims to fill this theoretical gap by setting out to explore aspects of human identity in the rapidly changing environment of the Lateglacial interstadial in north-west Europe. In essence, this research addresses patterns in lithic data. The core argument is that social processes, like identity creation, are useful and adequate explanations for such patterns. Thus it becomes both appropriate and possible to examine variability in material culture as a tangible signature of a human identity that is interwoven with, immersed in and informed by the material world.

The research outlined here will address the following interlinked questions:

1. How can material culture, and in particular lithic technology, be informative of prehistoric people's state of being? In other words, how can aspects of Lateglacial human personhood be approached through the study of lithic technologies?

2. What were the variable relations between Lateglacial hunter-gatherers and their material world? How were they configured in social and technological networks?

3. Where do the patterns in the lithic assemblages of the Lateglacial come from? How can they be interpreted? What is the social meaning of material culture variability?

Central to the discussion of these issues is the argument that Lateglacial behaviour revolved around embodied social practices. *Practice* is understood here as people's active involvement with the surrounding world, a form of interaction that leads to both action and reaction.

Therefore, this thesis has two primary objectives. The first is to develop the underlying theory for the construction of hominid personhood and determine its constituent parts. The second is to create and use an explicit research design to test for the process of personhood creation in the specific context of north-west Europe during the Lateglacial.

1.2 THE HUMAN-OBJECT RELATIONSHIP

The general area within which the questions of this research are posed is that of the relationship between material culture and society, of how things relate to people. At every level and in all aspects, human lives are entangled with natural and man-made objects and, although the past may be alien to us, the proverbial foreign country, there is no good reason to doubt that this was the case since the very remote antiquity.

The relationships between past humans and objects can be constructed in a diversity of ways and through a wide range of practices. Most obviously, they can originate from human actors and orientate towards inanimate things. Even within this one-directional Cartesian paradigm the relationship is ambivalent. On the one hand, prehistoric artefact makers can be understood as reacting passively and almost semi-automatically to the physical needs of their existence: the materials they end up creating are moulded by their environments in order to secure survival. On the other hand, the makers of prehistoric artefacts are still the prime movers but this time they are seen in an active mode, as very purposeful actors who can use material culture not merely to subsist but also to form, maintain and transform meaningful social relations. Here, material culture is contextually manipulated to achieve, display and reinforce social outcomes.

Alternatively, the human-material relationship can be bi-directional, or better cyclical. This is the call for an open rift of materiality with Cartesian dualisms. And this is the relational approach favoured in this research, while always keeping in mind the

difficulty that lurks because of our inherent epistemological programming for dichotomous thinking (Malafouris 2004: 53). To paraphrase Claude Lévi-Strauss, "objects are good to think with". And to actually take this dictum of anthropological structuralism a step further, this work adopts a wider scope: one that sees objects, things, artefacts not only as good to "think with", where precedence is given to the structures of the human mind, but also as "good to interact with". In other words, lithic production and consumption is placed into a context of reciprocal practices that human and artefacts engage in, which in turn leads to a mutual becoming.

The suggestion that people make things and, at the same time, things make people forms another core point of this thesis: namely the material basis of human identity (Gamble 2007). For example, defining qualities such as "knapper", "hunter", "gatherer" etc do not exist in a vacuum; they are rather continuously negotiated through material objects. For instance, the production of a blade is a transformation of a mineral initiated by a person, which simultaneously renders that person a knapper. Similarly, the blade used to cut up a carcass is a sharp tool working as a helpful extension of one's hand that turns the user into a butcher. And the same blade, when exchanged or offered, becomes an-item-in-circulation that elevates the maker/ user/ giver/ recipient into a member of a social network.

The proposition put forward here is that the construction of the self and personhood happens at the small scale, at the local (Whittle 2003) and it emerges from the interaction with persons, places and material objects (Chapman and Gaydarska 2007). The aim of the thesis therefore is to explore the theoretical potential of linking the archaeological imprint of materiality to past human identity: stone tools and the concept of the chaîne opératoire in lithic technological studies are considered for their potential to underwrite social relationships and constitute humanness.

The proposed relational framework for human existence aims to reconcile the distinction between archaeological data and the social processes that produced them. A principal concern of archaeology is the explanation of the temporal and spatial distribution of variation in the form of artefacts. The prevailing assumption for material culture variation is that it reflects the variation in the culture that produced the material in the first place. Processes that create social differentiation and their material

manifestations have been often labelled “cultures” or “technocomplexes” (Clarke 1978) and their interpretations involved the subject of “style” and the technological notion of “the chaîne opératoire”. The stance taken here questions the exclusive relevance of the collective level of the group as the platform for technological choices to occur. In order to avoid the inferential leap that cultural groups are responsible for cultural traditions and styles, I explore the potential of focusing any social explanation for the material patterning and the practices bound up with it on the smaller unit available, the single entity, the individual. The term is not used here in its westernised context, which will be thoroughly discussed in subsequent chapters, but rather in its primary definition as a particular, single human being, a person, contrasted to but still co-existing with larger collectives, the social group. In doing so, not only do we have a kind of Palaeolithic archaeology where the social interpretation prevails, but also the adopted framework is bottom-up and thus flexible. For this thesis, major issues such as agency, chaîne, and style reside in the small, the trivial, the short-term, the mundane, and the individual as a generic unit of reference in contrast with the collective of the system. Obviously there is a dialogue and reciprocity between the two units but what interests me here is the creation of an interpretative framework which starts with the smallest unit at the bottom and spreads upwards.

1.3 REASONS FOR SELECTING THE LATEGLACIAL CASE STUDIES

In order to test the assumption that personhood of prehistoric hunter-gatherers is attainable through the study of material culture variability, I have chosen to discuss sites from north western Europe that belong to the approximately two thousand years that cover the warmer part (interstadial) of the Lateglacial period. My two primary case studies are the open air sites of Hengistbury Head in Britain and Rekem in Belgium. Hengistbury and Rekem were originally selected because of their broad contemporaneity, their comparable excavation and documentation methods, their topographical similarities, their absence of osseous material and their common interpretation within the processual-rational paradigm. Additionally, and in order to

expand my scope on an inter-site and inter-regional basis, I pursue comparisons with Lateglacial sites and assemblages from the Middle Rhineland.

The rationale behind the choice of the European Lateglacial as the overarching frame of reference for this work is dual. First, the period provides rich lithic data sets that allow me to explore the implications set forward here. Secondly, Lateglacial research is established to date amidst a specific discourse that exhibits a fundamental lack of integration between ecological/ economical/ technological viewpoints on the one hand and more social/ cultural ones on the other. For these reasons, I feel that the Lateglacial offers an opportunity for creating more detailed interpretations that will involve complex relationships between people and material culture and that will inverse the prevailing top-down worldview. The line of thinking developed here is used to critique previous approaches to the archaeology of the Lateglacial, which were conventionally of an a-social character, or at best very little imbued by social meaning.

1.3.1 Problems with the European Lateglacial

The current approach to the study of the European Lateglacial is greatly hampered by two problematic issues. The first is the traditional cultural nomenclature of Late Upper and Final Palaeolithic archaeology, which is far from acquiring a unified and commonly accepted sequencing. It is commonplace that researchers tend to see similarity and contemporaneity across vast geographical regions. This truism cannot be better exemplified than with climate and material culture categorisations. Climatic events (like glacials and interglacials, stadials and interstadials) are recognised, put to succession and then applied to large (some times even global) scales. Considering lithic industries as an aspect of material culture, a not dissimilar process is adopted. The general discussion of the northern European Lateglacial archaeology is a case in point. There is an obvious effort to accommodate chronology and climatic information into the neat terminological continuum of Bölling – Alleröd- Younger Dryas, which in turn corresponds to the (Upper) Magdalenian/ Hamburgian – Federmesser- Ahrensburgian cultural succession. These terms tend to mean different things in different contexts. I

shall not expand on this issue here, since it is more appropriate to discuss it in relation to the archaeological examples in chapters 5 and 6. Suffice to say that such overarching similarities are not very realistic and hardly ever supported by the archaeological record itself. It is therefore conceivable that particular characterisations at local scales are more feasible and closer to a more persuasive picture of the past.

The second problem is the chronology itself of the Lateglacial. It is commonplace that untangling the thread of social narratives of the past needs a fine-grained temporal analysis. Human life has a limited duration and so does every human action. If we are to investigate certain social expressions of the human experience, we need to narrow down as much as possible the time slices we are dealing with. Consequently, the dating issue of the Lateglacial is not only a technical matter related to sample biases, statistical analyses and calibration; it is also a problem of interpretation regarding the use of chronological frameworks for building explanatory models.

The Lateglacial, which is also known as the Last Termination (or Termination 1), is the transition from the Last Cold Stage (traditionally known in NW Europe as the Weichselian Glaciation) to the present-day Holocene interglacial. It is a period of dramatic climatic change, involving many oscillations between colder (stadials) and warmer (interstadials) episodes. It covers the time period from approximately 15,500 to 11,600 calibrated years Before Present (cal BP) (Table 1.1). It is established that the major radiocarbon variations in the atmosphere during the Preboreal (Kitagawa and van der Plicht 1998; Lowe et al. 1999) indicate that use of uncalibrated radiometric dates for the Lateglacial remains problematic (van Der Plicht 2004). Nevertheless, the lack of consensus upon a commonly accepted calibration curve does not help matters and leads many authors to use raw ^{14}C dates (e.g. Pettitt 2008) despite the observed deviations.

Within Quaternary research, the Lateglacial episode is referred to as the Weichselian Lateglacial in northwestern Europe and the Devensian Lateglacial in the British Isles. It is characterised by warm events: these are the differentiated in the continental terrestrial record chronozones of Bölling (~ 15,500-13,800 cal BP) and Alleröd (~ 13,800-12,700 cal BP) of northern Europe, which correspond to the overarching Windermere Interstadial in Britain (Lowe and Walker 1997; Walker 2005). A much cooler stage, marking the return to an ice advance is the Younger Dryas in

northern Europe and its British equivalent of Loch Lomond Stadial (~ 12,700-11,700 uncal BP) (Barton and Dumont 2000). Another cold oscillation is the Older Dryas stadial, which is supposed to be a very brief phase (in the range of about 300/ 200 years) between the Bölling and the Alleröd. The place of the Older Dryas in the Lateglacial climatic sequence is not universally accepted in the literature and in some accounts it is considered as a brief cold interval within the Alleröd interstadial. Its existence as a separate pollen zone and chronozone can generally not be proven, or at least it can do so with great difficulty in northwestern and central Europe (Eriksen 1991: 33).

The effectiveness and the applicability of the above classification scheme have been recently challenged. Apart from the atmospheric radiocarbon fluctuations, equally confusing issues arise from the original establishment of the Lateglacial sequencing on lithological and palaeobotanical evidence from north west Europe. For many, this scheme has climatic connotations and it results in taxonomic units like biozones (based on fossils) or pollen zones. For others, the Lateglacial subdivisions correlate with radiocarbon dates thus becoming chronozones. This terminological uncertainty has further implications because, by definition, the boundaries of biozones and chronozones are completely different. Since the former reflect biological responses to climatic/ environmental changes, they are spatially and temporally diachronous and thus time-transgressive. By contrast, the boundaries of chronostratigraphic units can only be fixed and time-parallel (Björck et al. 1998).

In an attempt to overcome these confusions caused by the terrestrial sequencing of the period, a new stratigraphy for the Lateglacial in the North Atlantic region has been proposed. The scheme is based on the isotopic signal in the GRIP ice-core. The oxygen isotope signal (or trace) is reflected in the variations in the ratio ($\delta^{18}O$) between two isotopes of oxygen, the more common and lighter oxygen-16 (^{16}O) and the rarer and heavier oxygen-18 (^{18}O). The isotopic composition of ocean waters was different in glacial and interglacial stages (Walker 2005). The new scheme takes the form of an "event stratigraphy". "Events" are short-lived occurrences that have left some trace in the geological record, and which can therefore be used as the basis for correlation. They

include volcanic eruptions, earthquakes, glacier margin oscillations, floods, storms, mass movements, climatic events and sea-level changes (Walker et al. 1999).

In the GRIP ice-core the isotopic trace can be divided into a sequence of defined "events" comprising high-amplitude cold (stadial) and warm (interstadial) episodes, the former designated by the prefix Greenland Stadial (GS) and the latter by the prefix Greenland Interstadial (GI). Lower amplitude and shorter duration sub-stadials and sub-interstadials have also been recognised (Table 1.1). Thus the Greenland Interstadial 1 is further divided into a series of sub-events, with GI-1e, GI-1c and GI-1a representing warmer intervals, and GI-1d and GI-1b reflecting cooler episodes (Björck et al. 1998; Walker et al. 1999).

Lateglacial sequence for NW Europe	**^{14}C years BP (uncalibrated)**	**Calibrated years BP (based on CALPAL programme)**	**GRIP Events (stratotype)**	**Ice-core yrs**
Holocene	~9,700	11,620		11,500
Younger Dryas	~10,850	12,760	GS-1	12,650
	~11,800	13,750	GI-1a	12,900
			GI-1b	13,150
Alleröd			GI-1c	13,900
(Older Dryas)	~12,000	13,950	GI-1d	14,050
Bölling	~13,000	15,500	GI-1e	14,700

Table 1.1: Rough correlation of traditional Lateglacial subdivision with uncalibrated radiocarbon determinations, calibrated (corrected) ages, Greenland events and ice years.

Whereas the timescale for terrestrial sequences from the British Isles and northern Europe is based on calibrated radiocarbon years, the GRIP record is in ice-core years, which are counted by eye. The direct dating is obtained from the horizons within the GRIP ice-core record and is accomplished by counting the visible annual ice layers down from the ice surface (Lowe et al. 1999). The massive glacier ice has the tendency to preserve a detailed record of past environmental changes through the succession of

annual increments of snow, which under pressure, are converted to solid ice. The temporal resolution of the ice-core records can frequently be finer than a year, and potentially it can extend back to before 100 kyr BP. The records are capable therefore of providing information on both long-term and short-term cycles in Earth's past environmental history, as well as on important singular events, such as major volcanic eruptions or particularly pronounced climatic shifts (Johnsen et al. 2001: 300).

It has been proposed that the radiocarbon-dated chronostratigraphic framework for NW Europe be abandoned in favour of an event stratigraphy for the Lateglacial, based on the climatic proxy of the oxygen isotope signal from the GRIP Greenland ice core. This new stratotype for the Last Termination is independently dated in GRIP ice-core years and focuses on major climatic episodes/ oscillations. One of the major goals is to correlate these episodes with the relevant events detectable in the marine and the terrestrial records. (Björck et al. 1998; Walker et al. 2001; 1999). The advantages of this approach have been summarised by Walker et al. (1999). First, this subdivision is based on a single climatic proxy, that of the oxygen isotope signal. The ice-cores record the sequence of events at the highest available temporal resolution and the chronologies derived are less problematic than radiocarbon dates (Lowe et al. 2001). Secondly, it can be related to both terrestrial and marine stratigraphic records. And most importantly, being an "event stratigraphy" it places emphasis on the events and not on the boundaries between them (Walker, Björck et al. 1999). Obviously, it is not without problems to replace a local, biostratigraphical, climatic record with a high-resolution oxygen isotope record from faraway Greenland. It would be more convenient and helpful if oxygen isotope did not substitute but rather supplemented local stratigraphic schemes with chronological markers (events), which may be used to link far-apart regions into a net of local and regional event stratigraphies. One such important marker is the Laacher See volcanic eruption, which thanks to its documented tephra horizon allows the synchronisation of Alleröd climatic records over most of central and most of northern Europe (Eriksen 2002). The Laacher See Tephra event (LST) and its significance for Lateglacial archaeology will be further discussed in chapter seven.

To date, it is generally agreed that the data from the Greenland ice cores provide a very precise record of climatic change with a very fine degree of resolution.

Nevertheless, despite its limitations and problems, radiocarbon remains the most universally accepted method for dating the Lateglacial and although it is hard to bring together the time-scales based on the different calibration techniques, attempts are always made to render radiocarbon dating reliable and related to other sequences. For the needs of this research, the CALPAL online programme (Weninger et al. 2005) is used primarily for two reasons. First because it allows ready correlation between palaeo-environmental and archaeological datasets that are more relevant to European materials (as opposed to the South Atlantic corals that form the core of INTCAL programme which is also frequently used for Lateglacial calibration) ; and secondly because CALPAL has been used by many other researchers studying the Lateglacial of north-west Europe (Gamble et al. 2005) and therefore a common understanding and a degree of homogeneity can be achieved.

1.4 THE STRUCTURE OF THE THESIS

The thesis is divided into six further chapters that follow an internal tripartite organisation. The first four chapters set out the research agenda and suggest a theoretical and methodological framework for its interpretation. The next two provide the details of the selected case studies. The final chapter concludes this work after it rounds off the discussion with a more regionally-oriented approach to the Lateglacial archaeology. More specifically:

Chapter 2 establishes the social nature of the theoretical quest of the thesis and gives a background to the ideas prevailing social archaeology with a specific focus to the Palaeolithic and especially the Lateglacial.

Chapter 3 provides the theoretical framework that forms the backbone to the analyses in the following chapters. It highlights the concepts that are essential focal points in the study of human personhood.

Chapter 4 outlines the methodology devised in order to investigate the archaeological imprint of personhood. The framework draws from social theory and lithic analysis.

Chapter 5 presents the British site of Hengistbury Head and its lithic assemblage in a detailed technological analysis. The subsequent interpretation of the dataset seeks to apply the theoretical agenda of human personhood.

Chapter 6 describes the site and the lithics from Rekem in Belgium and, in a similar vein to chapter 5, makes the connection between archaeological materials and social processes.

Chapter 7 draws conclusions and discusses general aspects of Lateglacial personhood. It does so by broadening the regional scope of the case studies by including comparable information from the relevant sites in Middle Rhineland.

1.5 SUMMARY

The aim of this research is to investigate the possibility of gaining access and interpreting prehistoric human personhood through the artefactual world. The thesis explores the assumption that the cultural variability manifested in the lithic record of northwestern Europe during the Lateglacial Interstadial is a direct reflection of major changes in social organisation. The environmental changes of the Lateglacial instigated a period of significant economic, cultural and social changes that are reflected in mobility patterns, settlement systems, subsistence strategies, regional organisation and inter-regional communication. The theoretical and methodological propositions set forward here suggest that the connections between social groups of hunter-gatherers could well operate at the basic level of the individual and be achieved through embodied social practices, which are in turn mediated by elements of material culture.

CHAPTER TWO

The social in archaeology: the case of the Palaeolithic

2.1 INTRODUCTION

The basic claim of this chapter is that for the aims of the thesis to be pursued and its objectives met, a context of social archaeological interpretation is paramount. Archaeological materials have little, if anything, to say directly about the people who originally manufactured and used them in the past. Stones and bones cannot speak for themselves. Instead they have to be incorporated in a narrative, which by definition is historical since it deals with the past. A general context is needed for material remains of past lives to acquire meaning and thus become useful to the present. Insofar as this context takes into account the human factor in all its complexity as the acting agent, it becomes social.

A social archaeology is an archaeology of social being, of living a social experience in a natural and material world; it is the study of past people's existence in social terms. Time, space and material culture, the constituent parts of archaeology, are now acknowledged as social constructions (Preucel and Meskell 2004). In other words, the common focus lies in the understanding of the relations between people as well as among people and the material, the natural and the supernatural. In both cases, the relations that are developed are primarily social, in that they are an integral part of the construction of individual and group identity, they entail agency and they presuppose and at the same time create structure (Field 2005).

The truism that at the heart of archaeology exist human beings is a good starting point for understanding the need for social explanation. It is exactly the human nature of the record that affords archaeologists an account for the complex interrelationships that human beings weaved in the past, for the kind of structures that arose from such ties,

their stability, their change, and eventually for the societies of the past and their nature, organisation and function.

However, social archaeology is not necessarily synonymous with the archaeology of society. The reason behind such negation is that society as a coherent, pre-existing system of logic, from which artefacts and relations can be derived, does not exist (Shanks and Tilley 1987: 57). I suspect that a more flexible description, one that sees social archaeology in its effort to grasp the social aspect of human experience, as it is constituted and exposed through exchanges and constant negotiations between single entities and larger structures/ collectives, does no longer need arduous defence.

With the argument that the social in archaeology does not exclusively refer to the abstract and predetermined totality of past human society in itself, there emerges the notion of a continuous social process that negotiated and formed social roles, bonds and practices in the past. It is within this framework that issues of gender, class, power, ideology, social complexity and human cognition can be addressed. Moreover, the archaeological interest in theorising aspects of self-understanding and personal identity, advocated here, can be productive only when set against such a social background.

In what follows I shall discuss the different nuances of the social within archaeology. The point of this brief overview is twofold. First, I would like to show that the record of the Lateglacial is essentially untouched by social interpretations. Second, I would like to establish the need for such an interpretation. It is after all one of the main purposes of this thesis to integrate social questions and explanations to the existing understandings of lives lived by Lateglacial hunter-gatherers.

2.2 THE SOCIAL AS CULTURAL (CULTURAL HISTORY APPROACH)

In archaeology, and especially in prehistory, the link between artefacts and people is traditionally provided by the concept of *culture*. This normative approach is called culture-historical and is characterised by a sense of order achieved by the study of diachronic patterning in the record. It is profoundly descriptive in nature and it views

archaeology as a succession of cultures corresponding to specific peoples with particular "mental templates" or norms for conducting their lives (Shennan 1996).

The (anthropological) notion of culture itself is notoriously elusive. The social sciences and humanities have all given definitions or descriptions, but it is fair to say that a common consensus has not been reached yet. For example, primatology views culture as a set of socially learned and socially transmitted behaviour (McGrew 1998), while for socio- and evolutionary biology it is more of an adaptive and functional system (White 1959). Perhaps the central point to take away is twofold: first culture is not monolithic. And second, irrespective of each definition's disciplinary framework, the common denominator seems to be the inherent sociality of culture. The shared knowledge, understandings, ideas, beliefs, dispositions and habits presuppose a web of relations among the bearers of culture. Because culture requires a population, it is an emergent phenomenon, one that "arises from the interactions of multiple agents and it cannot be understood without reference to those interactions" (Chase 2006: 5).

An archaeological culture is much more narrowly defined and it is still most often identified with Gordon Childe (Childe 1929: v-vi). It is identified at the basis of the assemblage and it consists of associated traits, types, forms and practices that recur over time and space. Childe's definitions of cultures were based on diagnostic artefacts which were selected in a functionalist viewpoint. He argued that the importance of different objects lay in the actual role they had performed in prehistoric cultures. (Trigger 1989:170; Morris 2000).

The cultural-history approach works under the organising principle that archaeological artefacts symbolise cultural identities by virtue of their shape and their decoration and that their distribution identify ancient settlement areas of ethnic groups. Following this belief, cultural homogeneity becomes a signature of ethnic groups, while differences in material culture can be explained in terms of diffusion, migration and population replacement (Zvelebil 2001; Shennan 2000). Hence cultural continuity signifies ethnic continuity and archaeological cultures could trace ethnic groups in space and time (Morris 2000; Trigger 1989; Shennan 1989).

To take this argument a step further, it may be suggested within the normative model that the technological and/or typological systems not only signify different

cultural/ ethnic groups but they also indicate different biological species altogether. This is the case, for instance, of the much debated case of the Middle to Upper Palaeolithic transition, where the cultural groups in question are primarily biological groups. The arrival of anatomically modern humans in Europe (AMH) and their interaction with the pre-existing Neanderthals has been mainly interpreted on the basis of lithic industries, along with chronological and stratigraphic data. Currently there are two competing scenarios: According to the first model, the AMH dispersed into Europe bringing with them the clearly identifiable Aurignacian industry and acculturated the Neanderthals who under this influence produced the Châtelperronian. On the other hand, the second hypothesis adheres that the Neanderthals developed the Upper Palaeolithic traits of the Châtelperronian independently of the new species and their blade production technology (for a summary and the basic arguments of the debate see Mellars 1996, 1998; Klein 1999; d'Errico et al. 1998).

Within the domain of Palaeolithic archaeology, typologists such as de Mortillet, Breuil and especially François Bordes were eager to detect stylistic variations within stone tool industries, which would geographically and chronologically correspond to cultural groups and would therefore account for cultural change. The major changes could occur only through the replacement of one tradition, and therefore one people, by another (Shennan 2000: 811). Early French Palaeolithic research, in direct analogy with palaeontology, was seeking for "fossils- directeurs", fossil indicators, to act as diagnostic markers. Cultural entities were regarded as natural categories, which were "inherently discontinuous and did not modify their form from one context to the next"(Sackett 1982).

For instance, in the "Mousterian cultures in France" Bordes (1961) introduced a comprehensive type list, which incorporated all elements of an assemblage, and a separation of typology from the ordering of assemblages into phyla. Thus the classic Mousterian complex was composed of five major groups (facies) –Mousterian of Acheulian Tradition A and B, Typical Mousterian, Denticulate Mousterian and Charentian Mousterian- on the basis of the varying sequences of handaxes, scrapers, points and other types (Bordes 1961). He interpreted this variation as being synchronic because of the interstratification in the Perigord rock-shelters. Synchronicity

(contemporaneity) implies that the variation is cultural, with facies being cultural variants, representing different ethnic groups of the Middle Palaeolithic society and thus "acting as ethnic calling cards" (Bordes 1961).

This model, which understands the social aspect of material culture as a system of cultural differentiation, was rejected by the "New Archaeology" of the 1960s and '70s (see section 2.3). Since the 1990s, however, the issues raised by culture history have attracted renewed interest, though altered with respect to "processualism" and various "evolutionary" or "Darwinian" archaeologies (Davies 2000: 14; Shennan 2004: 7). Recent examples of the re-awaking of the culture-historical perspective can be found in the quest for regionally specific types of handaxes in the British Lower Palaeolithic. The increasing variety of handaxe types throughout the Lower Palaeolithic and the intra-assemblage diversification in the late Lower Palaeolithic of Britain is approached as cultural differentiation (Wenban-Smith 2004). Also, spatial and temporal changes in hunter-gatherer material culture patterns are interpreted as changes in population dynamics, albeit this time the rather simplistic explanations of diffusion and migration are replaced with evolutionary concepts of cultural transmission mechanisms (Shennan 2000).

2.3 THE SOCIAL AS RATIONAL (PROCESSUAL APPROACH)

Opposed to the artefact taxonomy and sequencing of the culture-historical paradigm stands the understanding of culture change and variation as adaptations of human populations to their environments. For example, the very influential Grahame Clark's examination of prehistoric social life was conducted through a functionalist point of view: culture was formulated in ecological terms and the ensuing reconstruction of economic, social and political organisations was based on the contribution of culture to the function of the prehistoric communities (Trigger 1989). A good illustration of the above is Clark's account of the flagship British Mesolithic site at Star Carr (Clark 1972). The detailed environmental analysis of the site, at the time, furnished a very rational understanding of socio-economic life at a lake-side camp, which was repeatedly

occupied at winter time by small groups of people who were leading a profoundly ecological life while hunting red deer and gathering wild plants.

In a similar line of thought, the New or Processual Archaeology of the 1960s and 1970s drew heavily from the natural sciences and especially anthropology in an attempt to explain what were primarily economic principles and decisions through an evolutionary viewpoint. Archaeological cultures were analysed as functional systems, which were made up by equally functional components of the larger ecosystem, such as economy, technology, demography, subsistence and ecology. The sphere of culture was interpreted as a series of adaptive responses to alterations in the natural environment or in adjacent competing cultural systems (Trigger 1989: 296).

In Palaeolithic archaeology, this new way of thinking about cultures and variation in the record led to the second leg of the disciplinary argument concerning the changes observed in the layers of the rock shelters of the French Mousterian. In the preceding section, the culture history paradigm as expressed by Bordes (1961) regarded the variation as cultural/ ethnic: artefacts and assemblages are created by cultural traditions associated with different ethnic groups and are not dependent on the tasks they were made to perform. On the contrary, the processual assumption for the same archaeological observations is that only behavioural variation and functional necessity can explain the material differentiations in the record. As a consequence, assemblage variability was explained anew as functional and as related to different toolkits serving different functions such as killing and butchering, cutting, incising, shredding plant materials etc (Binford and Binford 1966). According to this hypothesis, French Middle Palaeolithic assemblages were composed of a plethora of stone tools that represented different activities in varying proportions. In this sense, changes observed in the archaeological record are the result of function stemming from the material conditions in which they are produced and used (for analysis and references on the "Mousterian Debate" also see Mellars 1996).

It is safe to say that Processual archaeologists, while dealing with matters of theory, did not concern themselves much about social processes. The social system was often identified as a mere subsystem within an overall system (Hodder 2004). Notably, such quantifying systemic model was put forward by David Clarke (1978). Drawing

heavily on contemporary (New) geography, "Analytical Archaeology" developed a hierarchy of fundamental entities: attribute, artefact, site/ assemblage, culture and "technocomplex", the latter defined as a group of cultures characterised by assemblages sharing similar families of artefact types that appeared as broad response to specific environmental and/ or technological conditions (Clarke 1978 : 366, fig. 75). This partition of material culture into discrete levels has been criticised as "increasingly anachronistic and out of place, … reminiscent of the older culture classifications" (Lucas 2001: 115). Nevertheless, it may well be the case that despite his common interests in archaeological classification and explanation of cultural change, Clarke differed from culture historians in that the levels of cultural entities were not fixed and overarching but rather "continuous and multidimensional systems of elaborately networked elements" (Clarke 1978: 413). With this scheme, the study of culture change could still be addressed with an array of modern analytical techniques but it was never followed up (Shennan 2004: 7). This last comment brings to the fore the idea that culture history and processualism are not mutually incompatible: they are both concerned with chronological and geographical comparisons, as well as with typological classifications but they use them in different ways. Therefore there might be at least some benefit from cross-fertilisation (Davies 2000).

Within the processual paradigm, the reconstructions of past societies were conducted on the basis of mobility studies and settlement patterns. These were thought to reflect human interaction and present the behavioural strategies adopted in an attempt to optimise adaptiveness and success in terms of obtaining natural resources, energy and information. For example, the ethnographic study of hunter-gatherer subsistence and settlement patterns provided the frame of reference for prehistoric spatial organisation and human behaviour across the landscape (Binford 1980). A crucial notion, still powerful for Palaeolithic archaeology (e.g. Straus 1986; Eriksen and Fisher 2002; Fitzhugh and Habu 2002), is the distinction between the "residential mobility" of foragers and the more sophisticated "logistical mobility" of collectors. The former corresponds to the equatorial or sub-equatorial "Bushman" peoples who exhibit high residential mobility. When there is a shortage of resources the whole camp is moved in search for a new foraging territory. In the latter system, as employed by the Nunamiut

Eskimos, the residential mobility is less frequent. In this logistic manner of exploitation it is only task groups that are sent out to bring resources back to the camp (Binford 1980).

An initial call for enriching the prevailing adaptive explanations with more social meaning came more than thirty years ago. Renfrew (1973) was happy that archaeology was a respectable discipline, awash with hard-core science. Talking about the megalithic monuments of north-west Europe and the major advances in the Near East, he noted that they could no longer be accounted for by diffusionist explanations. Obviously, there had to be a different answer for all the innovation, change and development. He therefore felt the need to urge archaeologists to develop social explanations of the past in order to account for culture change: "to study much more closely the processes of change operating at home, at the developments in subsistence, in technology and in social organisation which led to the local and spontaneous evolution of these things" (Renfrew 1973: 11). It was clear therefore that Renfrew's proposition shifted the emphasis of archaeological attention to questions of a more social nature. However, the key constituents he advocated (quantitative studies in population and settlement density, investigation of social stratification, anthropological parallels, studies of exchange, and research of social environments rather than ecological landscapes) were not far away from the practices of the leading processual paradigm of the time.

It seems therefore that Binford and Renfrew were calling for more behavioural and socially complex understandings of the variability of material culture. Nevertheless, within ecological, economic and behavioural viewpoints the prevailing assumption always regards every social component to be connected to past people's reasons, decisions and strategies. Hunters and gatherers, foragers and collectors are adopting varying strategies within natural surroundings that are clearly shaped by environmental factors, without appearing to be involved in active negotiating relationships with their world and its elements. This is the rational understanding of the world and people's place in it. It is rooted in the Cartesian model of opposing dualisms, where humans are removed from their worlds for analytical purposes: so as material elements (archaeological residues) can be used as direct proxies for abstract behaviours and processes.

2.4 THE SOCIAL AS RELATIONAL (POSTPROCESSUAL APPROACH)

Despite the New Archaeology's success in establishing an agenda of scientific methods, its adoption of mainly eco-systemic views was accused of producing an essentialist outlook on culture. As a reaction, a fresh turn in archaeological theory was initiated, collectively termed postprocessual. Because of the polyphony therein, postprocessualism has been more appropriately described as an era rather than a movement (Hodder 1991), or a condition instead of a unified research program (Preucel 1995). In broad terms, wherever the new archaeological tradition was adopted, the positivist/ functionalist stance of New Archaeology's processualism was replaced by the relativism of postprocessual thinking. This discourse was based to a large extent on (postmodern) developments in social sciences and placed the focus of interest on inventiveness and innovation that were not externally dictated. The new theoretical platform was criticised for lacking objectivity and scientific rigour, but its proponents eagerly turned the argument around claiming that since archaeology is not an exact experimental science, personal and methodological biases are inherent. In their view, only a less rigid interpretative framework could allow for investigating aspects of the past that, though hardly quantifiable, were still important to be explained (Preucel 1995; Trigger 1989).

Social archaeology is met with a renewed vigour in the postprocessualist agenda and is now equated with the human experience. Such a theoretical development, apart from its phenomenological origin, requests a diferent definition of society, not as a layer cake any more, but rather as a "construction and constitution of social order and social practice. The social is a … relational whole, an open field of relations. ... Social order is constituted in the practice of individual social actors which relates to historical context, not an abstract universal pattern" (Shanks and Tilley 1987: 59). Similar approaches are familiar within social theory (Giddens 1984; Sewell 1992). They promote a recursive relationship between larger structures and their smaller inhabitants who, instead of merely being constrained within, they shape social practices to cope with the circumstances and conditions they encounter (Barrett 2001).

Postprocessual archaeology discards the notion that adaptive behaviour is the driving force behind human existence and thus moves away from the study of large-scale impediments. Having rejected the dynamics of adaptation, it focuses on new kinds of social theory that centre around the micro-logistics of everyday life. The introduced theories of social practice emphasise the role of material culture in the active negotiation of social roles and actions. When the mundane practices of people as they go about their rudimentary duties are studied, the weight shifts to the dynamics of all kinds of mutual relations and meaningful interactions. For Hodder (1991) two ideas are of extreme importance in conducting archaeological interpretation of this kind. First, material culture is "meaningfully constituted" in that it is an integral part of social relations. And secondly, the overlooked individual has to assume a central role in theories of material culture and social change. Social and cultural transformations emerge from a self-conscious, active, intelligent individual; one that is eager and capable of making decisions and of constructing his/ her own history through a dialectic relationship with society. Thus, the emerging interpretational framework conceptualises the single entity, the individual, as the elementary unit of analysis. The basic point is that social life is the constant exchange between the intentions and actions of the individual and the larger structures of social life (Barrett 2006).

With regard to the meaningful significance of material culture, the postprocessual realm argues that things, objects and artefacts do not just exist. They are made/ used/ employed by someone in order to do something. Consequently, material culture does not passively reflect an abstract, a-personal social system, but rather it helps create society through the actions of individuals. The active role of material culture in constituting society is so crucial that "human existence cannot be disentangled from the material world in which any behaviour is embedded" (Hodder and Hutson 2003: 15). The relatively cross-disciplinary field of material culture studies (Miller 2005; Gell 1998; Ingold 2007) views the physical world as an object of exploration which, through theoretical reflection, has a considerable potential for providing new insights. The complex and interactive entanglements between people and things supplement the question of how the former make the latter by inversing it. The attention is now equally placed on how things make people, how objects mediate social relationships and, in

doing so, whether they have a form of subjectivity and agency of their own (for further discussion see section 3.5.2.2). This line of investigation refutes the position that human beings are giving meaning to objects in a unidirectional manner and is therefore congruent with the non-Cartesian viewpoint that was described in section 1.2.

In both anthropology and archaeology, the notion of materiality is important. In a relational way, it encompasses the view that "material or physical components of the environment and the social practices enacted in that environment are mutually reinforcing. The material world and the social practices that take place in that world bring each other into being and are therefore analytically indivisible" (Jones 2004: 330; Knappett 2007). In effect, the materiality of objects resides at the conjunction of the material with the social, as these domains are interlinked by way of symbolic force (the emergent property of hybrid relations; Gamble 2005). The deep sociality of materiality can be at times opposed to the physical properties of the material and in doing so it can appear as a vague and ambiguous philosophical construct instead of a concrete actuality (Ingold 2007). The resulting frustration is of dualistic nature and perhaps it can be overcome if materiality and materials are seen not as antithetical but as redistributed modes of engagement with the world (Latour 2005: 76). This way, materiality can be recast as simultaneously social and material (in the physical sense) and it can be approached in a series of shifting moves along the abstract- concrete continuum.

As already mentioned, the other major contribution of postprocessual archaeology is the introduction of the individual as a legitimate unit of analysis. Nonetheless, the process of populating the archaeological past with acting people is hampered by basic disagreements about the meaning and the merit of the concept of the individual (how generic or specific, how contextual, how complete or distributed, how networked with group and community etc). These issues will be exhaustively dealt with in the following chapter, as will the closely associated theme of human identity and personhood. Suffice it to say that in recent years the relationship between the individual and society, the socialisation of the individual and the meaning of being a human person in past communities is so prevailing that postprocessual social archaeology is quite often the archaeology of identity.

Before taking a closer look to the position that social archaeology occupies in Palaeolithic research, I would like to discuss briefly my previous mentioning in passing of the influence of phenomenology. It is fair to say that the individual-focused approach gives rise to theories of embodiment (again, see chapter 3). It is the exploration of embodied actions of human agents with regard to materiality that puts the emphasis on subjectivity and emotions and brings to the fore a philosophical doctrine that promotes the production of meaning through mutual interactions and hybrid relations between animates and inanimates. Crucially, the description of the experience of human existence as an embodied practice is sought in reinterpretations of architecture, place and landscape (Tilley 1994, 2004; Thomas 2004; Ingold 2000), of investigating more mundane artefacts (Ingold 2000a), or of perceiving the senses (Hamilakis 2002). Beyond doubt, the archaeological interest in phenomenology has brought exciting new opportunities for investigation and explanation that are humane in their essence. In the process, it occasionally may have resulted in mere empathetic approaches of past experiences that were proved to be unsubstantiated (Brück 1998). Despite the limitations of using analytical categories such as present embodied knowledge to access past experience, phenomenology successfully reassesses rationalistic dichotomies, redefines materiality and the relationship between people and things, reconsiders the concept of the human person in ways beyond the modern western model of the individual (chapter 3) and underlines the need to accept different kinds of social relations and practices (Brück 2005).

2.5 THE SOCIAL ARCHAEOLOGY OF THE PALAEOLITHIC

Within prehistory, the Palaeolithic seems to be relatively untouched by social interpretative approaches (Gamble 2004). To a large degree the responsibility lies in the long preoccupation of the discipline with the levels of societal complexity. Past societies have been traditionally classified in multiple principal categories depending on how complex they were. Depending on the classification system, social life ranges from “bands”, which usually correspond to hunter-gatherers; through “segmentary societies”, which refer to tribes; to “chiefdoms”; and finally to “early states” (Renfrew and Bahn

2000 3[d]); or it would develop from "bands", to "intermediate societies" (tribes and chifdoms), to the "complex societies" of states and empires (Schiffer 2000). Exclusively dealing with mobile foragers, Palaeolithic archaeology was constrained by its envision of the anthropological notion of the "band" as the sole form of sociocultural organization. Drawing on anthropological views of the 1970's, hunter-gatherer bands were stereotypically regarded as "the original affluent" society in which egalitarian groups of people could survive relatively easy (Kelly 1995). Other typical overgeneralisations of the "Pleistocene band society" idea were their egalitarian nature and the almost institutionalised sharing of resources, such as food, which served as evidence of equality (Shennan 1996). Misconceptions of closely knitted bands persevered for long despite significant evidence for nonegalitarian social institutions and for hierarchical political organisation (King 1978), or for hierarchy arising from completely different to the traditional concept resources, such as the transmission of knowledge (Shennan 1996).

These anthropologically based generalisations are not the only reasons that hamper our understanding of Palaeolithic social life. Equally problematic is the regard of the archaeological record, especially when compared to later periods of prehistory, as patchy, poor and elusive. More often than not, it is its mere nature that renders it qualitatively and quantitatively insufficient for any study other than that of technology, economy and ecology (Gamble 2004). Another reason for the lack of a social explanation in the Palaeolithic is the absence of a coherent epistemological paradigm. Clark convincingly points out that no matter how much hard data archaeologists accumulate, the controversies and the gaps within the discipline will not be resolved because data are paradigm-dependent and have no meaning apart from the conceptual frameworks that define and contextualize them. In his words, "data do not exist independently of conceptual frameworks… what exists … are bones and stones in ancient geological contexts ... However, they do not become data until they are organised, classified and measured according to investigator-derived schemata. And it is in these activities –common to all science- that preconceptions and bias factors play important roles" (Clark 2001: 143-144).

Fortunately, in the last decade, these limitations are being constantly challenged and a social archaeology of and for the Palaeolithic is now under way. Initially, it was the richer record of the Upper Palaeolithic that offered a more fertile ground for such theoretical quests. For example, the study and interpretation of parietal art looks as if it moves away from descriptive generalities of images and caves. Attention has shifted from painting techniques, entopic phenomena and specific animal species (e.g. Lewis-Williams and Dowson 1988; Leroi-Gourhan 1982) to the social implications of why, how and where the images were made as well as to the interaction of modes of execution, meaningful spaces and social relations in a shamanistic background (e.g. Gamble 1991; Mithen 1988).

Apart from the art, Upper Palaeolithic technology has been occasionally looked at as a social practice, particularly through an agentive perspective. The guiding principle for analysis has shifted from the exclusive consideration of the technological knowledge and the technical features of the artefacts to the embodied practices that interweave human agents with the material world. In her practice-oriented study of bone and antler Magdalenian technology, Dobres modified the concept and methodology of the traditional chaîne opératoire (Dobres 2000). The material parameters of Magdalenian social agency of organic tool production reside in the technical gestures of the makers and their bodily endeavours. Additionally, they were found to be not so much constrained by tradition as much as enabled by a world that was socially mediated (Dobres 2000). Similar interpretations of technological acts as meaningful social engagements have been offered for the cases of Etiolles (Pigeot 1990) and the Solutrean (Sinclair 2000). Both these studies of lithic technologies signify socially fashioned knowledge, skills, personal identities and inter-personal relationships by bringing to the foreground the concept of agency through the embodied relationships between tools, their makers, techniques and the affordances and constraints of the raw materials. More recently, attention to social agency also encompassed the temporally more distant Middle Palaeolithic. In Mousterian technologies, though concealed at the level of finished artefacts or spatial patterning, social agency was uncovered at the level of the Levallois flaking method (Gravina 2004).

Eventually, the consideration of social forces and processes engulfed the whole spectrum of the Palaeolithic (Gamble and Porr 2005 and contributions therein). Here archaeological investigations of the Pleistocene are practice- rather than behaviour-based and are informed by the analytical unit of the individual. Both faunal and lithic evidence is used in order to detect various dimensions of Palaeolithic social life while acknowledging the role of individuals as complementary to that of groups in shaping social relations, and affecting cultural and social change (Gamble and Porr 2005a).

The argument that social life can be studied and that the point of reference can and should be the individual, even for remote periods, has been introduced in a comprehensive review of the European record from the first occupation of the continent at around 500,000 up to 20,000 years ago (Gamble 1999, 2004). Providing an active role for hominids in creating their social lifestyles and relations establishes a bottom-up model of social organisation, which envisages the intelligent decisions and acts of individuals as part of the system influencing its structure. In this case social structure and individual agency, the capacity and the act of doing, are linked in a duality (Gamble 1999: 34-35, 38). The reciprocity described affirms the constant interplay between microscopic entities and the macroscopic whole. In other words, individuals negotiate the structure of the system and their place in it and by doing so they actively (re)define themselves. The investigation of social life through the lens of the bottom-up approach is possible via network analysis. The ego-based overlapping web of relations amongst people varies both in size and the quality and strength of the bonds that tie. Familiar actions and routines take place and relations are weaved at familiar places (locales) where individuals meet and bring resources. A web (via tracks and paths) of inter-connected locales constitutes a familiar landscape (the landscape of habit), which effectively is the physical world known to hominids by their own repeated movement and experience (Gamble 1999). The exploration of networks advances our understanding of the individual, without abolishing the group, and its relations with things (material culture) and places (locales) through familiar enacted routines (actions) and it therefore offers a hybrid, relational perspective of the world.

As a final remark, I would suggest that the investigation of social meaning in the Palaeolithic would benefit greatly from an approach as comprehensive as possible. To

regard the record from one single perspective is surely limiting both the available data and our perceptions. If we are to accept the call to abandon Cartesian dualisms, we should also try to avoid divisions from the opposite direction. Perhaps aspects of rational and relational viewpoints could combine at times in order to collect data and formulate research questions. For example, the adoption of a bottom-up social examination, while clearly stating its starting point and chosen unifying frame of theory, need not refuse to refer back and interpretatively fertilise a more top-down model. Likewise, the integration of the strongest methodologies of processual and postprocessual archaeologies, as different in their interests as they may be, might be worth exploring. I believe the work in this thesis takes a similar stance: it is using a relational framework to pose new social questions (about human identity) on the Lateglacial record of north west Europe and in doing so it is complementing, rather than rejecting or contradicting, previous (rational) interpretations of the same archaeological reality.

2.6 THE SOCIAL ARCHAEOLOGY OF THE LATEGLACIAL

When it comes to the issue of a social model for the Lateglacial, it can be clearly stated from the very beginning that such a construct simply does not exist. This comes as a surprise, especially since, as mentioned before, the Upper Palaeolithic is the period of the era that has basically attracted some interest with regard to agency and other aspects of social investigation. One would expect that the nature of the Lateglacial would provide a challenge for such endeavours: apart from being quite well documented archaeologically, it is also the final Upper Palaeolithic boundary touching almost at the margin of the Holocene. For many generations of archaeologists the transitional periods were an interesting field in their own right and they offered a receptive ground for social interpretations of the changes documented or sought after. Nevertheless, though the Lateglacial and the subsequent Palaeolithic/ Mesolithic transition are well studied the absence of social theories of meanings is striking.

To exemplify this, three accounts of the Lateglacial record have been chosen, which differ in length and detail (two of them are monographs and one a short article) as

well as in their interpretational stands. And though all of them are comprehensive and useful, and they do add a lot of information, they fall short on their social explanations. What is strange, is that they all refer to social organisation and structures but they choose to approach them from "a-social" points of view.

More than thirty years ago, Grahame Clark produced an overview of the Palaeolithic occupation of Scandinavia (1975). In reviewing the archaeological record, his primary focus was not the social organisation. Rather he insisted on the importance of economy as a self- regulating subsystem. For him, issues of subsistence and seasonality were significant because they were the way to adjust to the physical and environmental conditions which dictated the rhythms of social life. Clark used the concept of the ecosystem in his archaeological account. The ecosystem, he argued, is a balanced interaction between social and ecological factors. In this ecological model "the essence is that relations between the several components are complex and reciprocal. There is no single determining factor… What matters at any moment of time is that as a result of the interplay of these and other forces the system works in a particular way" (Clark 1975: 11). The social aspect of the settlement patterning of Scandinavia was interpreted by the so- called "social territories". There are four main kinds of territories that human societies occupy and exploit, namely the home-base, the annual territory, the social territory, and finally the techno-territory (*ibid*: 13). In short, while his view is more economic and ecological and less technological and social, his understanding of culture, culture continuity and culture change is reminiscent of Childe's conclusions. He too groups assemblages based on specific similarities and assigns them to social territories; this is the case of the Lateglacial record of Poland, northern Germany and Denmark (*ibid*: 70-84).

In his account, Dolukhanov recognises as early as in the first paragraph the dynamic interplay between society and natural environment and in an attempt to make it more powerful he coins the term "eco-social" system. In just seven pages, he gives a thorough description of the archaeological and climatic record of France, the north part of central Europe and the northwest of the Russian Plain during all the phases of the Lateglacial. For every region he discusses the factors of ecology, settlement patterns, economy and material culture. His final conclusions, drawn on this information, refer in

large part to the social subsystem. He identifies changes in hunting and therefore changes in the hunting gear and differences in the ways of life and the population dynamics (Dolukhanov 1979: 874). Though these conclusions are of a social character up to a degree it cannot be overlooked that they satisfy more the "eco-" part of the theoretical framework they belong to. The social archaeology that is advocated in this paper does not leave much room for the individual and its agency.

In the sphere of Lateglacial northern European research, Berit Valentin Eriksen is a key player (Eriksen 2000a, 2000b; Eriksen and Fisher 2002). More than a decade after the aforementioned works, she published her study on cultural continuity and change in the final Palaeolithic- early Mesolithic boundary in southwestern Germany (Eriksen 1991). The monograph adopts the "adaptive dynamics" as a framework for analysis, which is a branch of the processual systems theory (*ibid*: 16-18) and therefore lacks a significant social core. The research question being cultural change and transition, a systems-based archaeology seemed appropriate. Culture and society are considered as a web of interlinked sub-systems or units, such as demography, economy, ecology, communication networks, and production chains. In this kind of archaeology once again the logic behind everything social is that of function. Each subsystem is called in to maintain the balanced existence of the whole cultural system, which is heavily conditioned and dependent upon the environment. In other words, the "adaptive dynamics" model investigates and explains adaptive behaviour strategies. For Eriksen, the lines of evidence for cultural change come from the analysis of settlement patterns and resource exploitation in the study area. Discussions about settlement groupings, site-catchment, economy, subsistence and seasonality transmit limited information about social systems, structures and dynamics, and even less so about individual actions and agency. Theorising culture as an adaptive and functional entity is only one aspect of interpretation, leaving plenty of room for additional investigations into more social insights.

To sum up, the literature above seems to be embedded within the functional, processual paradigm. The agenda for interpretation is dominated by the accumulation of hard evidence, empirical data and information, with the primary goal being to shed light on past economic behaviours. Such strands of thought obscure the people who lived in

the past by ignoring their wishes, plans and actions. And although occasionally such analyses advocate their determination to point at social factors, this could only be a matter of semantics: a mechanistic, functional approach to economic decisions or subsistence behaviours will always be such, even if it is labelled "social".

In support of the claim for the prevailing attention to empirical data and essentialist outlooks, a number of recent papers reinstated the interest in the Lateglacial of northern Europe without expanding into socially oriented concerns. A quick review reveals that their explicit focus fluctuates only within issues regarding the process of recolonisation of the region. More specifically, the research undertaken deals with the mechanics of the colonising process in terms of settlement strategies (Housley et al. 1997); the timing of the recolonisation and its accuracy (Blockley et al. 2000; Housley et al. 2000); the patterning of northern expansion in relation to climate (Blockley et al. 2006; Terberger and Street 2002; Barton et al. 2003; Gamble et al. 2004); the mode of movement with regard to population dynamics (Gamble et al. 2005; Shennan and Edinborough 2007); and finally the reoccupation of northern Europe through an understanding of the employed technological strategies (Conneller 2007). Of this plethora of contributions, perhaps only the very first and the very last can be said to attempt to elucidate aspects of the social lives of Lateglacial hunter-gatherers by discussing mobility and technological patterns respectively.

At this juncture, I hope that the picture of the Lateglacial research delineated here justifies the very core of the present thesis. The virtual absence of questions pertaining to social aspects of Lateglacial life, let alone the development and application of methodologies for its explanation, are a good reason for the current undertaking. Relatively recently, both the British Final Upper Palaeolithic site of Hengistbury Head (chapter 5) and the Belgian Federmesser site of Rekem (chapter 6) have been exhaustively analysed and superbly published (Barton 1992; De Bie and Caspar 2000). Both accounts provide a wealth of useful information for the reconstruction of not only the every day activities at the sites but also of technological and cultural strategies during the north European 13th and 12th millennia BP. Nevertheless, Hengistbury Head and Rekem seem to be devoid of more social understandings. In agreement with the above-mentioned advocating of integrated and complementary research frameworks, I

set out to incorporate a relationally fashioned line of enquiry while revisiting the lithic data from the two sites. Therefore the stone tools themselves, their usage and their spatial distribution, as well as raw material procurement and knapping methods, are now seen as meaningful parts of the processes that constructed, negotiated and informed aspects of social human identities. In other words, this thesis is filling a small part of the theoretical void that Lateglacial interpretations ignored to date.

2.7 SUMMARY

In this chapter I presented a brief overview of the quest for the social in archaeology. My purpose was to show that, irrespective of the definitions it acquired or the processes and conditions it was sought in, social archaeology barely begun to touch upon the Palaeolithic.

The very definition of archaeology as the study of the material remains of the past denotes that it is cultural in essence. This does not mean however that objects are just cultural signatures. Rather they are the material remains of specific interactions. It is what is left behind from everyday actions and human-to-human or human-to-Other relations that can be studied. In other words, artefacts such as stone tools are indicators of when, where and amongst whom these interactions took place. These interactions, instead of being static and fixed, occur within an ever-changing landscape and across time. Past people who made and used the materials had specific identities and personhoods. These personhoods were actually co-created by the material world and that rendered them historic rather than universal (see chapter 3). Thus the archaeological record must be treated as the visible part of the lifeways of past people. If, as it will be argued in the following chapter, the process of constructing, negotiating, maintaining and altering human personhoods and identities involves the use of materials, then the archaeological record is part of this creative process. Consequently, observable changes in the record can be seen as changes in the process of identity creation.

What would be useful for Palaeolithic archaeology are new questions about past individuals and their societies. The lithic technology should not be studied only as an industrial system exhibiting stylistic differences and functional variations. This could only lead to a strict division of the record into monolithic units of clear succession, with the occasional gaps that occur in-between accounting for “changes”, “transitions”, “points of origin” and even “revolutions”. Perhaps, instead of looking for different geographical and chronological cultures, we should start looking for differences in the material realisation of social interactions.

In the next chapter I will greatly expand on all these issues by laying out the social theories that form the backbone of this research.

CHAPTER THREE

Theoretical framework: identity and the distributed self

3.1 INTRODUCTION

In this chapter I will set out the theoretical framework of the thesis. Its core deals with the quest for the individual, while using a relational rather than a rational perspective. In such a setting that calls for a social explanation, materiality and embodiment play a very significant role in the construction and transformation of social relations and consequently in the formation of human identity.

For the rest of the chapter I will argue that, with a given refinement of the record and its resolution, past social entities and lived lives can and should be investigated. If one of the goals of archaeology is to reconcile a Cartesian-like distinction between the small-scale of the recovered data and the large-scale of the processes that actually produced them (see section 1.2), then the engagement with social theory on human identities can be proved very productive. I believe that the rigidity of matter, in the form of human artefactual remains, and the fluidity of human identity (and here is another long-standing dualism) can be combined in a common interpretative field that revolves around practice.

The sociological notion of *practice* can be understood as people's active involvement with the sensual material world and their own embodied social and symbolic knowledge (Owoc 2005). It is an ongoing series of practical activities (which are corporeal by nature) that are dual in character: they are both action and reaction. The duality of practice helps bridge the analytical gap between individuals and society: practice may be a product of persons involved in activities but is simultaneously oriented towards the world (Owoc 2005: 262-263; Barnes 2000).

Under this light, issues pertaining to the way we conceptualise prehistoric material culture, in this case lithic artefacts from the European Lateglacial, fall within the

scope of the quest for social entities, their identities and purposes. Such an approach takes the mobile hunter-gatherers out of the passivity of merely ecological beings and promotes them to social agents. To this end, the archaeological record which will offer the original information about people and their placement, be it presence, absence, movement, continuity or hiatus, cannot be interpreted as unrelated to humans, their wishes, urges, decisions and finally their actions. The most popular explanatory tool in the Palaeolithic has always been the environment. However people do not only exist in the landscape while driven by harsh or favourable climates but they also interact with and construct it. While the important role of the environment could not be discarded altogether, people should not be eternally restricted to a passivity inflicted by factors and processes that overwhelm them. Instead what one can argue for is an added interest in individuals and social constructions.

But how could the Palaeolithic, and more particularly the northern European late OIS2 record be revived with human agents?

3.2 HUMAN IDENTITY

Over the last two decades identity seems to be a major theme in archaeological theory: how can we know what people were like through their material remains? The material conditions in which past people lived helped create people's identities and provided the active setting for these identities to be performed, negotiated, retained, dropped or altered. Since it is these material conditions that archaeologists recover and interpret, their centrality in forming/ shaping notions or conceptions or categories of identity cannot be overlooked in any investigation of the past. Recent archaeological literature seems to recognise the need to incorporate the question of identity to any understanding of the past (Gardner 2007; Insoll 2006; Diaz-Andreu et al. 2005). Many approaches draw on a range of contemporary social theory, anthropological studies as well as philosophical traditions. Amongst the latter, particularly well-suited to address the issue is the phenomenological school of thought with its useful overarching of the matter-mind division; more recently,

another theoretical strand that seems to be gaining momentum in the discourse on identities is semiotics (Lele 2006; Knappett 2002).

How can identity be defined? Although in recent years questions of identity have attained a remarkable centrality within the human and social sciences, there seems to be a lack of a unanimously accepted single definition. The elusiveness of the notion is explained by the fact that identity is not a totality that consists of a list of attributes. Rather, "identity presupposes a relation of difference to something else. Identity is differential, depending on systems of difference, relational sequences. Identity is always incomplete, never final because of the potential infinity of relations of difference" (Shanks and Tilley 1987: 58).

The term takes on different connotations depending on the context within which it is used. Despite this fragility and incompleteness of the notion itself, the way identity is conceived today is more like an umbrella term, incorporating and combining a multiplicity of factors such as sex, gender, class, ethnicity, status, power and age. These categories, being either choices or imposed by societal structures, account for who a human being is. While all of these notions may have not received the same degree of attention and the same level of analysis in archaeological theory, they have contributed to the idea that identity is culturally and temporally unique. As Lynn Meskell puts it: "It is now axiomatic that our identities are fluid and mutable, under negotiation as we experience life, and open to manipulation if we have the opportunity…. Identities are not coherent or prior to the interactions through which they are constituted" (Meskell 2001:196).

Looking for past people's identities is an attempt to understand what they were like, what they were making of their lives and their world, how they placed themselves in it, how they went about in their everyday routines, how they formed and maintained relationships with other people, living or dead, animals, places, things, natural elements, how they acquired, evaluated and interpreted experiences that shaped their bodies, their minds, their interactions and their physical surroundings. In other words, looking for past people's identities is trying to understand how they defined their own self. The experience of selfhood is a process where the self is context dependent and contextually variable (Meskell and Preucel 2004). The multiplicity of personal identity therefore invokes the similarly constant redefinition of what it means to be a person.

At this juncture, it seems necessary to present and define the concept of personhood, which is closely related to the multivalent notion of human identity. In my use of the term, I follow Fowler (2004; also Jones 2005) in what in the anthropological literature is often also referred to as "self" (or "selfhood") (Mauss 1985). Personhood, or the condition of being a person within a given context, involves constant change, while transformations occur to the person through life and after death. People may pass from one state of personhood to another (for further discussion of these states of "dividuality" and "partibility" see section 3.4). Personhood is attained not only through relationships with other human beings, but with things, animals, places and the spiritual features of the cosmos (Fowler 2004: 7).

Before taking these points any further, I would like to introduce one more point of contention: that of the unit of reference.

3.3 INDIVIDUALS, GROUPS AND NETWORKS

The way archaeologists choose to answer questions about the manifestation of identity in the record is invariably linked to the unit of analysis they adopt. In other words, depending on how archaeological imagination perceives the peopling of the past, there are different approaches to the degree of importance, not to mention the mere feasibility of recovery, of that past self-awareness. For too many years the relevant analytical unit was the "group". Within the long phase of culture-historic approaches, the observable patterns in the record were evidence for the existence of universal laws guiding human culture. And the author of the driving force that was human culture was the group. Individual decisions and actions were ignored to affirm the primacy of the (cultural) group, which acted as a summary of these decisions and actions. In processual archaeology there was also little space for individuals. Even when form of individual existence was acknowledged in the form of a chief or a leader, this was treated as "emblematic of sets of power relations in society, at particular points in trajectories of social evolution" (Whittle 2003). It was only with post-processual archaeology that the interest shifted from finding universal cultural laws to asserting the constant social manipulation of culture. In such a frame the role of the individual as an active, culture-performing and society-negotiating element came to the

foreground. Since the 1980s, the adoption of a more intimate perspective on society, one capable of focusing on the individual as active social agent, as well as the group, saw hunter-gatherer social organisation from a different perspective. In part, it is now the individual which, while acting autonomously and interacting dynamically with their natural and socio-cultural environment, forms a flexible social base from which to consider a range of different situational adaptations (Burke 2008: 137-8).

This social theory of action, which views individuals and their agency as the source of all social and economic life whose imprints we study, can and has been accepted both as a reasonable and a plausible methodological tool for the study of prehistory. In the discourse of social archaeology of Egypt five discernable "types" of individuals have been proposed: the historically known, the iconographically depicted, the anonymous body of mortuary evidence, the artist/ craftsperson that left material evidence of actions and technological styles, and the cultural concept of the individual that concerns the ways that people in the past may have conceived themselves (Meskell 1999: 34-35; also Knapp and van Dommelen 2008: 18). The first three categories are specific individuals. By contrast, the anonymous craftsman and the self-inscribed entity of the final two categories are what has been usefully called "generic individual" (Mithen 1993: 393). It is this notion, for example the hunter or the flint knapper, that is of interest to prehistory. Generic individuals of the past need to be situated in physical, social and economic contexts in order to examine their actions as manifested by their material remnants. Quite uniquely, Hodder suggests that we should seek to uncover "individual lived lives" like that of the "Ice Man" or the individual buried in Çatalhöyük by situating the microprocess of the everyday life to the large-scale social and structural processes (Hodder 2000). Methodologically, this focus on a specific individual is potentially problematic in that it restricts agency approaches to extremely limited archaeological data and that, though individual-oriented, it negates the attempt to move beyond top-down models of social change (Dornan 2002: 311). In short, I would argue that, in order to avoid the dangers of isolation and even solipsism, we should accept beforehand that the process of emphasising individual experience in the past will reveal a contextual and networked version of the individual.

The contextualisation of past individuals raises the question: how far back in prehistory can we actually detect them? Contrary to more traditional viewpoints of the

Pleistocene record as obscure, insufficient and of a patchy and low-resolution nature, the Palaeolithic in fact renders a fertile ground for the application of such an approach. Palaeolithic archaeologists do have a wealth of information to work with. For example, knapping, hunting and butchering are individual actions whose traces are preserved. These actions do not take place in a vacuum but rather they happen within a context defined by time and space. They give out information not only about general tendencies and patterns but also about the particularities and idiosyncrasies of the people involved (indicatively see Sinclair 2000 and various contributions in Gamble and Porr 2005). Furthermore, it is perhaps the most typical characteristic of the Palaeolithic peoples, their mobility, that can be seen for once not as a drawback compared to the sedentism of the later farmers but as an advantage. For it can be this perpetual moving from one place to another that has left direct traces of individual activity and has formed the actual archaeological record.

Establishing personal identity in archaeological studies does not contradict or reject the relevance of the group. Every person, during the course of their life is part of a smaller or bigger network of other persons, member of many groups. These networks of social relations both shape and are shaped by individuals. It is the interconnection and the dynamics between the social, the collective on the one hand and the atom-like entity of the individual person on the other, that needs to be explored for a proper understanding of the past. What happens in everyday life is not solely defined by the law-governed system. This view is favoured by the structural, top-down approach to society where culture is inherited and institutions precede and suppress the actors. In a marked dualism, social structure is separated and exists independently from the individual. By contrast, a bottom-up model of social organisation envisages the intelligent decisions and acts of individuals as part of the system influencing its structure. In this case social structure and individual agency, the capacity of and the act of doing, are linked in a duality (Gamble 1999: 34-5, 38). The reciprocity described affirms the constant interplay between microscopic entities and the macroscopic whole. In other words, individuals negotiate the structure of the system and their place in it and by doing so they actively (re)define themselves.

The investigation of social life through the lens of the bottom-up approach is possible via network analysis. Such exploration of networks advances our understanding of the individual at least as much as that of the group. However, it can only be useful if it is stripped

of the misconception that networks are external pre-existing systems imposed on already organised societies. Networks are not ready-for-use structures but rather evolving elements of the social landscape, reciprocal forms of social relationships and simultaneously creators and recipients of social bonds. Palaeolithic social organisation has been quantified using network analysis. Through the study of raw material movement, hominid social evolution and social organisation has been arranged in two discrete socio-spatial units. The scale-restricted "local hominid network" and the geographically broader "social landscape" (Gamble 1993, 1996) are informative concepts albeit with blurry spatial dimensions and boundaries. This quantification of social life is taken to the next level when an ego-based overlapping web of relations amongst people is further introduced. These networks vary both in size and the quality and strength of the bonds that tie together. Thus the "intimate" network of a few people offers security and draws from emotional resources; the "effective" network of up to twenty people deals with the logistics of daily life and is created and maintained by material resources; the "extended" network of 100-400 socially distant but still known to ego people is negotiated by symbolic resources. Finally, beyond these personal networks, there exists a global one, which is defined by "otherness", and is measured in thousands of socially very distant people (Gamble 1999).

I feel that the bottom-up network theory always runs the risk of being unfairly interpreted as a "sum of its parts"; a linear, upwards expanding notion that merely consists of acting individuals that come together in numbers. This misunderstanding is avoided when it becomes clear that "network thinking encourages a focus not only on entities but also on connections" (Knappett 2007). I believe that this thesis offers such *qualitative* aspect. Because its focus is firmly placed on *social practice* rather than distance and radius of raw material movement, it can exemplify how prehistoric social life was experienced by individuals *within* groups and networks. In a practice oriented framework, persons actively manipulate their material environment with repeated and familiar sets of embodied habits. The world, in turn, necessitates further actions and reactions so that complex networks of people and objects are created over time and space (Gamble and Porr 2005a: 9). One more reason for the adoption of the individual as the present unit of analysis is the need to account for the variability of the Lateglacial lithic record, but this will be discussed in subsequent chapters. Finally, this kind of approach to past social life has two additional methodological

advantages for this research. First, it offers a relational perspective of the world, where relations between people and things are not pure but hybrid. Secondly, the network's inherent dialectic between the individual and the group mirrors another similarly recursive relation: the one between structure and practice. Both these points will be re-introduced and further developed in later sections.

3.4 THE INDIVIDUAL AND THE SELF: ASPECTS OF PERSONHOOD

Having asserted the possibility of the individual being a legitimate dimension of Palaeolithic enquiry, the next question that needs to be answered is "what individual"? The notion of the individual has served as a paramount feature in the construction and development of Western societies for the last five centuries. The question of when the individual was discovered and acquired its historical role is not of relevance here. What is important is the common sense for the western world that the individual and its significance, its rights, its responsibilities and its relationships are delineated, promoted and safeguarded by laws, conventions and institutions. Actually, the individual as we know it is such an integral part of the western way of living and thinking that it would be almost impossible to comprehend either without it.

What is understood by the notion of individual in modern western terms is only one form of personhood, which both stems from and results in a very specific set of relations with other people and the surrounding material world. This is the Cartesian rational paradigm, which largely dominates "the western metaphysical habit of thought" (Thomas 1996), and for that matter affected the conceptual frameworks of archaeology. A genuine product of the Enlightenment, the main feature of Descartes' philosophy was the separation of body and spirit. This division offered a scientific foundation for the Protestant world-view, which was based on cognitive rationalisation (Turner 1996). Within this system, elements and concepts of the world form opposing dualisms. The constituent parts of antinomical distinctions such as mind/body, nature/culture, animate/inanimate, object/subject are positioned at two ends of a spectrum and the relations between them are asymmetrical. This viewpoint gives absolute

precedence to persons over things and the direction of their relations can only be unilateral: material things are the external supports or measures of an internal life (Gosden and Marshall 1999: 173).

On the contrary, a relational experience of the world advocates a blending of connections and interactions between people and objects, by not dividing the world into opposing categories; the relations are not fixed and prescribed but balanced and can work effectively both ways. Rather than enabling only people to feel and act in a certain way towards materials, the relational approach allows a meaningful two-way process. In other words, a new type of "hybrid culture" emerges based on networks of social relations among humans and non-humans where agency is equally ascribed to both (Gosden 1999). Such a cosmology is made up of "quasi-objects", (i.e. hybrids of people and things), which are both human products and human beings (i.e. persons) exhibiting social intentions (Gosden 2004).

By assigning different social significances to people and things, these two stands, the rational and the relational, have affected the way people enmesh into relationships as well as the way they construct their personhood. The rational aspect of self corresponds to the definition of individuals as completely autonomous and self-contained entities. According to it, they are agents, bounded selves by virtue of their bodies who affect others, and hence society as a whole, through their actions. These actions can take any form but they normally exist within a framework which recognises an acting person and society. Thus the individual, at least in western thought, is a unique self, a sovereign entity who is the author of all their acts (Gosden 1999). However, while there appears to be a general consensus on the argument that human beings are free agents, directed by a sovereign consciousness, there also seems to be controversy about how identity should be conceptualised.

Accessing the individual in material culture is by definition a challenge to archaeologists and it tends to be even more difficult for prehistorians. But the practical hindrances are not the only problematic issues. The theoretical positions surrounding the use of the concept of the individual in archaeology are equally complicated. There is almost universal agreement that the notion is historically situated and loaded with western connotations (Hodder 2000; Fowler 2004; Kirk 2006; Jones 2005; Knapp and van Dommelen 2008; Knappett 2007). Nevertheless, most archaeologists eager to examine people's roles in past societies are willing to enliven the latter with protagonists, while offering various

definitions and dimensions to these individuals. In doing so, they ensure that they have the necessary ingredients so as to discuss embodied lives, social structures and social practices. By way of contrast, Julian Thomas is increasingly critical of the notion of the individual because of its western connotations (Thomas 2000, 2004 ,2008). It seems that his main fear is the equation of the *individual* with the neo-liberal, right-wing neo-conservative ideology of *individualism*; in his view the debate runs deeper than terminological or semantic disagreement and he tends to remain persistently unconvinced about the usefulness of the individual in the archaeological discourse (also see Verpoorte 1996 for similar critique of "methodological individualism").

As it has already been stated in the introduction, identity is not static but fluid, negotiated rather than received, and it is formed and operated within specific contexts of social practices often bound to perceptions and relationships with the environment. Thus different expressions of social relations can cause the emergence of different layers of personal identity. This is the case of the "dividual", the distributed personhood, which acts as the relational counterpart of the notion of individual. As such, it is not separated from the world of things and objects but is instead linked to it by hybrid networks.

A dividual can be described as a composition of all the various relationships in which the person is enmeshed (Strathern 1988: 268-269). This means that there can be no fixed concept of the person as long as there is no fixed frame of social encounters. And since people act and are perceived differently under specific conditions, they cannot be one thing or one set of things at any one time. In this sense, they can only be plural or better, multiple. This multiplicity is important as it rejects binary viewpoints, which favour either the group or the individual. For the same reason, society itself is composite: it contains both individual and dividual elements of personhood.

Marilyn Strathern in her ethnographic work on Melanesian gender formation and material relations, "The Gender of the Gift", juxtaposed the western to the Melanesian understanding of personhood (Strathern 1988). While studying the Mount Hagen People of highland New Guinea, she showed that the western view of society and the individual is not universal and therefore not the only appropriate analytical method applicable to all cases. In specific sets of relationships, beliefs, attitudes and experiences, Melanesians adopt specific

forms of personhood, which produce and are also generated within different material conditions. Strathern pointed out that they are separable into particular parts, relations, flows or elements. They are not bounded, whole and intact but dividual and divisible. Furthermore, the Melanesian social relations are such that separate. Especially in the context of ceremonial exchange, people are disposing parts of their personhood in order to establish or maintain relationships to others. The partibility and the giving away of one's own parts in relation to others is allowed by the multiplicity of personhood produced within a multiplicity of relations (Strathern 1988: 185). The partible nature of people means that groups become homologues of the singular and vice versa (*ibid*: 13). The intention of this comment is not to recreate the dualism between the collective and the unit but to act as a pointer that relations involve analogies and not hierarchies. In Melanesia personal identity is made up by different elements that are responsible for specific actions. The separate identity of the person is less significant than the relationships of exchange and alliance the person is involved in.

A number of Melanesian ethnographies point to the mobile and fluid relations which account for the contextualization of identity not as individual but rather as a series of flows between social persons and social subgroups. To this understanding of personhood, exchange is crucial: "It could be said that these persons give away parts of themselves (substances, material goods, names, stories etc.) as part of being a socially significantly self, and it is only through these parts and the relations they cite that the person exists. Personhood could thus be interpreted as the relations between (and constituting) persons, including media like objects, bodies (and body parts, both human and animal) and other social elements" (Fowler 2001: 139).

Another relational account of personhood, alternative to the traditional western one, emerged from Busby's ethnographic research exploring southern Indian persons in the Marianad fishing community. In this case, there are "substantial connections between persons who are not bounded individuals in the western (stereo)type" (Busby 1997: 264). Persons are integrated with other persons in terms of relations, so that two bodies have a shared boundary and thus operating as a single system. For example, when men and women are married they are thought of as sharing one body; this combination is integral to their performing their gender roles effectively (*ibid*: 269). Their relations are understood as a series of balanced exchanges. The person is conceived of as "internally whole, but with a

fluid and permeable boundary", as formed around an essence, which is maintainable by flows of substance across the permeable boundaries of the body (*ibid*: 269). Busby's conclusion is that Indian bodies are not partible, like Melanesian bodies, but permeable. The dividuals are again connected through exchanges of substance, only in this case it is not extraction of parts but merely extension of flows out from a person (*ibid*: 275-276).

Fowler has summarised all the above discussion by defining three different models of personhood (Fowler 2001: 140). Aside from the rational, individual aspect of being, there has been identified the relational, dividual personhood. The latter takes on the form of partible or permeable dividualitity in different contexts. The Melanesian dividuals primarily engage in relations that separate elements of their selves and the world. They are partible because they detach and give away parts of their person. The offered part is then internalised by the receiver. The part will be returned, probably in another form, and it will be again internalised. The southern Indian dividuals primarily engage in relations which integrate. They are permeable because they circulate quantities of substance between people. Finally the western individuals predominately engage in relations which alienate.

However, these models are not mutually exclusive. LiPuma argues that the bonds that join people to other people and the surrounding world are rational as well as relational: "In all cultures there exist both individual and dividual modalities or aspects of personhood. The individual facet emerges in the use of language, …. the existence of autonomous physiological systems of the human body, and by the fact that the body serves as the ground and signifier of the person. … By equal account, all societies encode relational, dividual aspects of personhood" (LiPuma 1998: 56).

The understanding of people as dividuals has raised criticism concerning a naïve use of the dividual, dealing mostly with a false opposition between the western individual and the non-western dividual (LiPuma 1998) and an uncritical replacement of the individual (Fowler 2001: 140; Gosden and Marshall 1999; Jones 2002b). Nonetheless the focus on the relational aspect of personhood opens up the possibility of seeing the relations between people and objects as mutually embedded, which has important implications for the way we interpret material culture (see section 3.5.2.2. on the agency of objects).

To sum up, the question that arises is much more fundamental than exploring and ascribing various aspects of personhood to the makers of past material cultures. Irrespective of whether past peoples defined or experienced themselves as individuals or dividuals, what archaeologists should be primarily concerned with is how such experience was situated in cultural attitudes and social structures. Far and beyond terminology and semantics, the fact remains that past peoples must have had a form of awareness of themselves (personhood / selfhood); what can drive us closer to that perception is the acceptance that they were capable of acting as social agents. In other words, the adoption of non-systemic bottom-up views of the past (like the one proposed in this thesis) needs to have as its stepping stone socially constituted entities with the ability to somehow affect both themselves and the structures that surround them. For the present work, these entities coincide with the prehistoric generic person, which is removed from the westernised methodological individualism and is open to a relational self-awareness also conducted through the materiality of objects.

Definitions

Personal Identity refers to the self-definition of individuals or groups (collectivities) either through similarities or through differences. Though the term is extremely fluid and lacks fixity, it is frequently understood and approached as a set of taxonomic categorisations like ethnicity, gender, class, power etc. More than that, identity should be viewed as an experience of selfhood, as a process where the self is depended upon different contexts (loosely after Meskell and Preucel 2004).

Person refers to an entity, human or not, composed through the temporary association of different aspects. These aspects may include features like mind, spirit, soul, body and denote the entity as having a form of agency (after Fowler 2004: 7).

Social Agency is the efficacy of intentional (human) action, whose consequences cannot be attributed to physical laws (loosely after Gell 1998).

Personhood is the context specific condition of being a person. Persons are constituted, de-constituted, maintained and altered in social practices through life and after death. Personhood can take up the form of different modes, or trends, in which people enmesh as they interact in a social way:

1. Individuality refers to personhood in which a persistent personal identity, according to the western construct, is stressed over relational identities. It results in a constant, fixed, indivisible, unitary and totalised self.
2. Dividuality is a state of being in which the person is recognised as composite and multiply-authored. People are composed of social relations to others to the degree that they owe parts of themselves to others.

2.a Partibility is a dividual state of being in which the person is reconfigured so that one part can be extracted and given to another person to whom it is owned. This is the Melanesian example of dividuality.

2.b Permeability refers to the state of being in which the dividual is made up of parts defined not as objects but as a flow of substances. The person can be permeated by qualities that influence its internal composition. This is the south-Indian case of dividuality (after Fowler 2004: 7-9).

Table 3.1: Indicative definitions of aspects of human identity.

3.5 EMBODIED IDENTITIES

Vast as the debate about the definition of an individual person and the notion of human being may be, the undeniable fact remains that persons are separately identified and socially allocated through their corporeal presence. An individual person is a being with a body. The obvious statement that the human existence is primarily corporeal is a premise that holds truth since the very first appearance of hominids, long before we can talk about humans the way we know them today. The common denominator of human presence is that human beings are embodied: their daily life is governed by the dictates and needs of their bodies. Fundamental actions like eating, drinking, moving, sleeping, and reproducing dominate and guide the human experience. Furthermore, the body offers a fertile field for the development of metaphors and myths concerning the individual and its social relationships: "(the body) is the foundation in fact of (religious and secular) mythological systems at least from an anthropological point of view" (Turner 1996).

Human identity cannot be conceived without the individual body, the medium that creates and is created by the relationships and interactions that take place throughout the lives

of persons. The centrality of the body to the human condition is not only based upon its function as an animate organism, a vessel for the hard wiring, the genetic information and the hormonal mandates. It is also stressed by its existence as a subjective agent and an independent context of its own making and in its own right (Dobres 2000). Apart from fulfilling biological needs, the body acts as the channel of emotional intensities and social constructs. It also provides a solution to dichotomous thinking. Knowledge, action, habit and activity, as well as agency and subjectivity, do not float freely but are instead deeply embodied and assume creative roles that overturn the inherent givens posited in mind/ body dichotomies (Lesure 2005: 241). To fully understand the residues of material culture archaeologists need to recognise that what is left behind is produced by the embodied person which is formed by its interactions with other humans, animals and plants, objects of material culture and elements of the landscape. Thus it is the embodied human person, as it goes through day-to-day experiences, that acts as an operator of culture. Bearing in mind that (Palaeolithic) persons (whether individuals or dividuals) have always had an embodied presence, the body gains a new significance.

The body, as a "naturally given" biological entity, is so familiar and yet so unknown and contradictory. The multitude of dimensions concerning the perception of the body in the humanities and the social sciences stem from the fact that the latter is bound to cultural and social factors. Religious, scientific and philosophical theories and practices constantly redefine the body's nature and its relations. As a result, diverse and conflicting approaches emerge.

It has been already mentioned that the mechanical rationalisation of the European Age of Enlightenment gave precedence to the mind, regarding the body as a machine directed by instructions from the soul. Thus the image of the individual human being emerging from the strict isolation and specialisation of the body and mind was one of control, domination and sovereignty (Turner 1996). This perspective on the individual is succinctly summarised in the famous dictum "cogito ergo sum": the rational, mental self comes first and is actually the prerequisite and the measure for the sensual, corporeal self.

In the 20th century, western intellectual tradition has been trying to transcend the mechanistic dualism between human consciousness and social and natural reality that juxtaposes the human subject to society and the world. Challenging these formulations,

developments within philosophy and social science redefined the social and theoretical notion of the body (Morris 1994; Ingold 2000). In the western world today the body is omnipresent. In modern western culture at least it is a means of expressing health and well-being and probably for the first time in history it is not considered private property but rather a matter of public discourse. Numerous strands of thoughts, and especially phenomenology and feminist theories, adopted a critical standpoint to the universally accepted value of the rational facts by starting to examine them in conjunction with the social and political circumstances and the existing power relations. The body is projected as an entity that exists and is experienced, that is formed through constant negotiations and redefinitions closely related to an eternal quest for an (even ephemeral) identity. Under this light, embodiment can overthrow the persisting dualisms, as it connects the materiality of the body both to the field of lived experiences (Joyce 2005) as well as to the consequences that social life inflicts on the body. The body/ mind relation is now perceived as a process, as a result of continuous interaction (Strathern and Lambeck 1998).

Archaeological theory, following the path of postmodern discourse, started to explore the human body as a universal, physical, biological and cultural object and the Cartesian separation of mind and body has been effectively challenged (various papers in Hamilakis et al. 2002). Our western intellectual inheritance of biologically determined, bounded individuals has contributed to the notion of the integrity of the human body. But the material past can reveal how the body often forms an arena of social and personal relations and manipulations. The fluid realisation through people, places and things in distant times and spaces can make one's self (partly) exist outside of one's own physical body. In such relational, dividual entities the body may be less integral and bound but it still is a site of negotiation and interaction (for an example of Bronze Age skeletal fragmentation see Brück 2006).

If the human body is understood as both meaningful and material, personal and social, then it is the carrier of selves and identities and the source of reference that structures cultural and social life (Gamble 2007: 67). The body should not be considered as an object but as the subject –"the existential ground"- of culture; also the latter should be focusing on *embodiment*. This is situated on the level of lived experience and as such it collapses the differences between subjective and objective, cognition and emotion, or even mind and body

(Van Wolputte 2004: 257, 258). The notion of embodiment is key to understanding social action because it is the medium for moving from social facts to the process of production and reproduction of these social facts.

3.5.1 Habitus, Performativity and Practice

For the archaeology of embodiment, the question of the body in society cannot be considered outside a framework of theories of social action. The idea that the body is a set of social practices is directly derived from anthropology, where the body is a potentiality that has to be systematically produced, sustained and presented in everyday life through a variety of social practices (Turner 1996). Following the understanding of this tradition, Pierre Bourdieu introduces the concept of *habitus* in order to account for the centrality of the body in social practices. In an admittedly elaborate definition, he describes the quotidian practices he calls *habitus* as "systems of durable, transportable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary to attain them" (Bourdieu 1999: 108).

The latin word *habitus* [1]accounts for a set of past social actions, a kind of grammar, which is absorbed or learned unconsciously, more like a second nature, in such a way that it still structures present social actions. The internalised "second nature" of the *habitus* is like "an unconscious feel of the game. It is a goalie in soccer sensing what to do the instant a ball is launched at the net" (Reyna 2002: 33). The notion was first investigated by Marcel Mauss in his discussion of bodily activities, like walking, eating, swimming, and the way they are specific to a given society and cultures. For Mauss *habitus* is a "technique of the body" that needs to meet two prerequisites: effectiveness, so that it can produce a desired result, and tradition, so that its transmission can be possible (Lechte 1994: 27). In Bourdieu's reworking of the term, "durability" and "transportability" ensure these prerequisites, while "the

[1] The term, which would be best translated in English as habitude, invokes the Aristotelian "ἕξις" (hexis) (Aristotle, Metaphysics).

structured and structuring structures" suggest the existence of an underlying system. *Habitus* is therefore the unconscious things people do for the production of particular practices. As a consequence, *habitus* causes practice and the conditionings of social realities (economic, political, religious, educational etc) produce *habitus*. Thus, if social realities produce *habitus* and *habitus* causes practice, then both the objective and the subjective are strung together (Reyna 2002: 33). This mental notion is embedded in the materiality that people live in, the body and it is externalised in embodied routines and practices (Gell 1998: 127). It also exhibits no room for intentionality in the understanding of human action, which is performed without conscious reflection and therefore beyond an individual motivation (Dornan 2002: 306). In its archaeological application it is best described by the "landscape of habit", which emphasises the daily routines that structure interactions (Gamble 1999). The experience of the material world and the dictations of a given society form a common-sense generally accepted knowledge. What is commonplace and normal is communicated to the individual and then reproduced through social processes and material culture. Therefore *habitus* allows the body to be a material phenomenon that both constitutes and is constituted by society (Field 2005).

The bodily materiality of habitus is not irrelevant to the notion of performativity put forward by Judith Butler. In her "Bodies that matter", Butler explores in depth two dimensions of identity, those of sex and gender, by interrogating notions of femininity and queer and their association with materiality. In doing so, she reshuffles present-day ideas about what is understood by those terms and she points out that although at first they may seem as natural givens, they are actually culturally specific. Butler rejects modern notions of sex as normative and "regulatory ideals whose materialization is compelled, and this materialization takes place through certain highly regulated practices… sex is an ideal construct which is forcibly materialised through time" (Butler 1993).

These regulatory ideals are categories constructed by society. Their value is negotiated, adopted or rejected in different ways in different social contexts. People living within these contexts, satisfy them in varying degrees and ways. This is true for notions that traditionally have been seen as undeniable biological facts, like being male or female, old or young. Butler's discussion of sex and gender lies on the core notion of performativity as a means of creating (or undermining) the regulatory ideals. Performativity is not a singular

"act", for it is always a reiteration of a norm or a set of norms, and "to the extent that it acquires an act-like status in the present, it conceals or dissimulates the conventions of which it is a repetition… Within speech act theory, a performative is that discursive practice that enacts or produces that which it names" (Butler 1993: 12-13).

Her argument becomes clearer if it is put within the context of discourse analysis, and more particularly speech act theory. A speech act is an action performed by means of language (like stating, asking, apologising, promising, requesting, threatening, thanking, and so on). Moreover, the things we do with words are rarely one-dimensional. Most of the times any speech is the performance of several acts at once: the act of saying something, like the grammatical and syntactical sequence of the words "I am afraid I cannot afford to pay the gas" (locutionary act); what one does in saying it, like the act of stating a fact that can also be perceived as a request (illocutionary act); and the effect the illocutionary act has on the listener, like the eagerness of parents to finance the offspring (perlocutionary act) (Finch 2000).

Going back to Butler, the "performative" she describes is a type of illocutionary speech act, where the action of the sentence (nominating, sentencing and so on) is performed by the sentence itself. Her example is that of the midwife's cry of "it's a girl", which is not merely a reflection of a biological given but a performative act, binding a gender onto a body. The baby girl is not a girl until the midwife declares her so, which proves the argument that concepts of gender are historically and culturally unique and can be created and explored. In other words, what is to be a man or a woman is a social definition. In terms of the sociology of the body, even physiology and biology are mediated by culture (Butler 1993). Thus performative acts are the domain in which "discourse acts as power" (*ibid:* 225) by producing that which they name. In a sense, we become a person by becoming intelligible to others, we are summoned into being as subjects through the address of the Other.

In both performativity and *habitus* the actions of the body are a force of producing reality and the importance of reiteration, tradition and effectiveness is held in common. It is through repeated action that these norms (like assigning gender or walking) are created and lived up to. The element of repetition and recitation implies that discourse has history. Thinking about and interpreting past performative practices which once were part of a given people's *habitus* should not be done out of context. It is important to always take into

account these people's complex, fluid and ever changing identities (whether being various different or coexisting facies of personhood). In that way narratives that do not simplistically thrust modern explanations into the past could be created.

Habitus is a powerful and useful notion because it allows for the (embodied) practice to construct and explain meaningful social and cultural structures. Its theoretical significance lies in the fact that *habitus* is above all a social thing; it is "a property of a social system" (Pickel 2005: 439, 451). In social archaeology, the concept of *habitus* (and performative practices in general) is welcomed as the Francophone counter-balance of the largely Anglophone agency theories that run the constant danger of being perceived as overtly individualistic (these points will be made in the following section). Within practice theory, *habitus* integrates material culture with the individuals that made and transformed it, and as a phenomenon that reproduces material culture it forges relations between people and their social contexts (Knapp and van Dommelen 2008; Jones 2005).

In my mind, the reproduction of material culture is doubly important because of the habitual actions and everyday choices observed in the field of the techniques of production. The operational sequence of successive steps, the technological chaîne opératoire, is an embodied, habitual, ordered and most importantly a social way of transforming materials. The chaîne is more than anything a social act involving bodily gestures, which interweave the makers, their acts and their objects. This is because the chaîne and its outcomes are parts of everyday life and they acquire social meaning connected to such processes as memory, learning and teaching. The concept of the chaîne in lithic studies, with regard to applicable analytical units and interpretative frameworks for past social practices, will be properly discussed with the methodology of the thesis (Chapter 4).

Finally, I would like to make two remarks concerning *habitus*. The first is the acknowledgement of its theoretical limitations. By its definition, the notion is concerned with the production and re-production of social systems and structures in a way that past actions are carried into the future. This conscious or unconscious perpetuation offers neither an explanation for change, nor for contextual differentiations. And when it comes to the variable archaeological record, this can be problematic as it automatically dismisses variation. The second remark recognises the definitional blurry of the term. It seems like Bourdieu and his followers were more preoccupied with what *habitus* did rather than what it was: it is

produced by social realities and it causes practices but we do not actually grasp its nature (Reyna 2002: 34). Though this criticism is legitimate, it does not hamper my adoption of the term. Contrary to the above, I am less interested in defining *habitus* and more eager to use it as an embodied universal reality which bridges the objective of the social to the subjective of the practice.

3.5.2 Social Agency and Practice

In social theories of practice, the emphasis is often placed on processes of change. Similarly, the discussion about human identity and personhood has highlighted their transitory nature. It is obvious therefore that a theory able to account for social flexibility and cultural meaning is in need. This adjustable fluidity of temporally, spatially and socially constituted action is the core of agency theory. The concept of agency, that is the efficacy of human action (Sewell 1992:2), has been introduced and researched within the field of social sciences. In the last twenty years, archaeological theory has been eager to adopt and implement the notion in its analyses and since then the debate it has stirred has never really subsided (for comprehensive accounts of agency see various papers in (Dobres and Robb 2000a; Dobres 2000; Dornan 2002; Gosden 1999).

In describing rather than defining agency, Anthony Giddens says that "agency concerns events of which the individual is the perpetrator, in the sense that the individual could have acted differently. Whatever happened would not have happened if the individual had not intervened. Action is a continuous process, a flow" (Giddens 1984: 9).

The main purpose of agency since its arrival is to place emphasis on the people, their intentions and their actions. Archaeology eventually caught up with this epistemological concern of the social sciences and acknowledged agency as a quality of action rather than an action itself, which forms and explains the material conditions of social life, the social, material and symbolic structures within which agents are placed and those agents' motivations and beliefs (Dobres and Robb 2000b). It has been suggested that, in archaeology, agency came as a reaction to the processual focus on behavioural responses to environmental

and other forms of change, which downplayed if not ignored the role of social action (Hodder 2004: 31).

A recurrent issue regarding agency's targets and applications surrounds the degree of significance of the agent's intentions. The approaches range from the absolute importance of targeted intentionality, to intended actions regarded as important as the unintended ones, to assigning value only to unintended consequences (Dobres and Robb 2000b; Giddens 1984: 8-14). Another point of debate is the interaction between agency and material culture and whether the material controls and limits the possibilities of agency (Dobres and Robb 2000b: 12). Finally, a controversial debate concerns the exclusive applicability of agency to individuals and raises the possibility of group agency (Wobst 2000; Gosden 1999; Owoc 2005).

One of the criticisms that the notion of agency has attracted in recent social theory is that it is connected to a modern, male, western, free-willed, empowered, rational, autonomous actor/agent. One way to deal with this inadequacy is to reconceptualise agency as something relational and define it as "the potentials for action that are implicit in the connections among people and between people and things … Human beings rarely carry out their projects in abstraction from a material world that also includes other people. Agency, then, might not issue from a single head but be dispersed in the network of relationships implicated in any single action. Like power, agency is less a thing we hold than a capacity we are involved in exercising" (Thomas 2000: 150).

3.5.2.1 Agency and Structure

Since in this chapter I have concentrated on epistemological dualisms, it should be mentioned here that in scientific sociological discourse the pervasive antithetical pair is that of agency and structure. In the glossary of terminology in the "Constitution of Society" structure is defined as "rules and resources, recursively implicated in the institutional articulation of social systems. Structure exists only as memory traces, the organic basis of human knowledgeability, and as instantiated in action" (Giddens 1984: 377).

The reference to the rules and resources brings to mind the system that Swiss linguist Ferdinand de Saussure introduced to the study of language. Saussure put forward the paradigm of a structured system as a complex of rules. His basic concept was that of the

linguistic sign, which being in itself arbitrary, can only be identified in relation with other similar signs, which together constitute the structured system (de Saussure 1983). This paradigm allows all language to be ordered and understood. Of crucial importance is the distinction between language as a system of communication (*langue*): an underlying universal set of items and rules that operates as a signalling system; and language as utterance (*parole*): the speech, the linguistic behaviour, that can be generated by those rules (Finch 2000). This fundamental dichotomy of langue from parole, yet another dualism, influenced deeply Giddens' distinction between structure and social practice (agency). According to the Saussurian analogy, structure, like langue, is a complex of rules, while practice, like speech, is an enactment of these rules in space and time (Sewell 1992). Only this time structure and practice should not be placed at the opposite ends of the spectrum. Giddens' structuration theory[2] attempts to reconcile human agents with social structures by virtue of the concept of the duality of structure, which postulates that "rules and resources drawn upon in the production and reproduction of social action are at the same time the means of system reproduction" (Giddens 1984: 19).

This idea rejects directly the dichotomy between agency and structure, the individual and society, and recasts it as a duality. In other words, when an agent acts, it is simultaneously constrained and empowered by the material and social structures in which it lives, and by acting within these structures, it contributes to their reestablishment. Thus structure allows for agency and agency reproduces structures (Whittle 2003). In this dialogue between agency and structure, social agents realise their own goals through strategies, but they do so within social structure. That structure, however, is not an external given but is rather constantly coming into being (Johnson 2006: 122).

3.5.2.2 Agency, Objects and Life Cycles.

The agency of social actors produces meaningful material action through the habitus of the actors; in turn, the agents' action secures a kind of structure that does not pre-exist but is rather embedded in both the actor and the social totality. The immediate question from this is "who or what is acting"? The obvious answer involves the single human actor, which

[2] The –ation suffix in this neologism suggests that structure must be regarded as a process and not as a steady state (Sewell 1992: 4).

invokes the familiar debate about the centrality of the westernised individual. A different approach suggests the notion of the "actor-network", where that which presents itself to an observer as an "actor" may be a whole network (Latour 2005). The idea is that the agency that can be distributed across a network resides in the associations and relationships between entities, rather than in the entities themselves (Knappett 2002: 100). Having had established that such relational networks can be human and non-human hybrids, there opens the possibility that agency can be allotted to objects too (Miller 2005; Barrett 2000; Dornan 2002).

In his anthropological theory of art, Gell (1998) is willing to expand the notion of agency to non-human agents in order to account for a relational domain of social experience and action. The inherent intentionality of human agency makes it readily attributable to people. In a relational universe however, where social relations are formed not only amongst persons, but also between persons and things and between persons and persons via things, objects have to exercise social agency. And it is the defining intentionality of agency that is at odds with artefacts. Gell transcends the obvious paradox by introducing two complementary sets of agents. First, he draws the distinction between primary (intentional beings) and secondary agents (artefacts through which primary agents distribute their agency effectively). Secondly, he describes the context dependent relation between agents and patients, which are defined as the objects casually affected by the agent's actions (Gell 1998: 12-27). The extension of agency from "humans only" to "all actants" also carries along the need for associations to extend beyond humans and the subsequent extension of the definition of the "social" (Latour 2005). I think we can safely assume alternative models of agency, much in the same way we can assume different models of personhood and identity. It is relational ontologies that allow for such local and historically specific notions of both human and material agency.

Subsequently, when social relations are built through social actions performed by agents who can be pretty much everything, artefacts have biographies (Hoskins 1998: 2). The biographical approach postulates that objects do not only provide the setting for human action; rather they are integral to it. Thus human and object histories complement each other and the way this is done ascribes meaning to the social interactions involving people and objects: "… the biographical approach seeks to understand the way objects become invested

with meaning through the social interactions they are caught up in. These meanings change and are renegotiated through the life of an object … Meaning emerges from social action and the purpose of an artefact biography is to illuminate that process" (Gosden and Marshall 1999: 170).

In this context things have a "social life" (Appadurai 1986) and mutual or overlapping biographies from their interconnection with other objects through a dense network of relationships (Kopytoff 1986). All objects of material culture can be viewed through their different moments of existence and use, which resemble the life cycles. If one recognises that not only persons, but also things, have life-paths (Thomas 1996: 55, 171), temporality and life-paths of objects give the object a biography of its own. This approach that stimulates emphasis on context as an important factor for grasping the meaning of objects has been adopted by archaeologists. Thomas (1996: 155) expands the notion of context to include social interaction by stating that: "the individual identity of an object would have emerged from a background of materials, persons, practices and histories".

This cultural biography of objects has also been regarded, rather insightfully, as a "palimpsest of meaning" which brings us into the domain of subjective time experience (Bailey 2007: 208). Objects are born, live and die, just like people. And just like people, they go through these moments within specific social contexts and circumstances. After their initial production, they go through various phases of use, exchange and consumption until their final discard. Even their end sometimes, whether it is accidental death or purposeful killing, is not permanent; in certain instances objects which are thought to have finished their purpose can be revived either through reuse or by being related to an entirely new context. For example, in archaeological reality, objects are "resurrected" not only through the excavation process. They also acquire a "second life" through analysis and interpretation. The descriptions given and the explanations attached to them are the catalysts for archaeological materials to be "alive", although perhaps in totally new, different or quite possibly "wrong" ways. Thus it becomes apparent that the metaphor of biography can be applied to objects since the element of transformation through time secures the existence of life histories and a mutual process of meaning acquisition between them and people. In such a relational universe, the things of the world acquire meaning and reveal their significance through their engagement in relations with others; thus it is not the mind of the all knowing

human beings that constructs the meaning and assigns the value of the world elements. Though the intention is not to suggest that a meaningful world could exist without human beings since the relationships that render objects contextually intelligible are inconceivable in the absence of people, the argument is that people emerge from a relational background rather than entering into relationships. The relationships concerned are not metaphysical connections among human subjects but real and heterogeneous networks that bind people and things together. Unique biographies are constituted by the memories and associations that humans attribute to artefacts: where they are from, when, how and for whom they are made. The social field is generated by the relational context in which people operate, a world of things that are understood in terms of their uses, their histories, potentials and connotations and not by an interpretative mental capacity unique to humans (Thomas 2000).

Throughout hominid existence objects and things have always been there. Even the crudest and simplest artefacts have played a key role in social life. In different contexts, under different circumstances and for different reasons material objects have been cut, ground, knapped, curved, crushed, painted, knitted, sculpted and built since the very beginning. The artefacts produced in these ways have been then held, worn, thrown, buried, lived in, worshiped, hated by their makers and users. And it seems to me that all these processes of social life can only serve to relate the individual to the object and vice versa. In other words, both entities are active agents. For example a blade is an inanimate man-made tool. But when it is held in one's hand it becomes part of one's body in that it is the extension of the hand. This is an undeniable connection between a person and a blade, which works both ways: the blade changes the boundaries of the human body visually and practically, and the body itself involves the stone tool in a social action. On the one hand, the person originally created a tool that they needed and at another point they decided to use this tool as a means to an end. This will easily make us recognise the person as an agent. On the other hand, the blade itself becomes animated in a way. When the first blows create it from the nodule and later when it cuts up an animal carcass, it is an integral part of the social action that takes place. The blade and its user form a new social identity, which can exercise a specific kind of agency. If there was a wooden spear in the making and then it was hafted to kill an animal from a distance, the social action would be entirely different and the meaningful relation between the person and the object would not be the same. So distinct

artefact biographies evoke different meanings, associations, memories, essences etc. These associations can sharpen into focus and fade away again, depending on context. A final distinction should be made between the relative success of biographical studies that rely on anthropological and historical information when compared to biographical studies of prehistoric objects.

3.6 IDENTITY, PRACTICE AND MATERIALITY

If we choose to approach the archaeological record with a relational account of the world, or rather if we choose to enrich the rational one with some fresh variables, we need a framework of social action that encompasses the meaningful links between artefacts and people. In preceding sections, it was established that human identity is created in conjunction with several agents and that although part of it may reside within the bounded self another part is constructed and manipulated at the interface between agents. Moreover, the adoption of this dividuality/ partibility as an appropriate mode of personhood may call for a metaphorical interpretation of the material culture emphasising people's places in evolving systems of hybrid relationships. Consequently, a theoretical construction that implies tangible and/ or non-tangible engagements between people and materials would be of great use. This is the concept of materiality that in its abstract form it disguises a great range of meanings: material remains, material expressions, the properties specific materials are imbued with and materialisation as a physical and abstract development (DeMarrais et al. 2004; Miller 2005; Knappett 2007; also see chapter 2.4). To use the same example as before, the blade is more than its mineral substance. It is also an extension of the body, a symbol of its maker's identity, a cohesive element of the group, a metaphor for the network, a memento. Moreover, in its material actuality coexist the anticipation of the excavator, the interest of the collector as well as the thrill, pain and agony of the researcher. The bottom line is that blade-ness does not only consist of the appropriate length, thinness, lightness and sharpness. On top of these qualities, it encompasses all possible meanings derived from the context and history of its manufacture and use.

The question then remains how the human-material engagement is carried out and what implications it has for identity construction. A step towards this direction has been taken by Chapman (2000) in his study of personhood in the Balkan Mesolithic, Neolithic and Chalcolithic. His theory examines the creation of distributed selves through the deliberate fragmentation and redistribution of parts and wholes. Chapman is interested in the "structural relationships between people, objects and places and the material dimensions of these relations in social practices" (Chapman 2000: 4).

The basic argument that runs through his work (also in Chapman and Gaydarska 2007) suggests that fragmentation of objects is a deliberate attempt to form enchainment between people, by possessing a fragment of the same object. The object can be broken up into fragments to create a set stemming from one original item, or several items can be accumulated and put together to create a set. When the items in the set are removed, they are then considered to be fragments of the set. Enchainment between people created through the distribution of fragments that stem from one set, suggests that there is knowledge of the origins of the fragments.

The theory of fragmentation has been developed and enriched since it was first introduced. Originally, Chapman established two kinds of social practice, enchainment and accumulation in order to describe two different ways in which objects can mediate relations between people. Enchainment describes relations achieved through the exchange of inaliable objects. The giving and receiving shape networks, chains of links, which distribute the sense of the person in time and space. Accumulation is the creation and maintenance of relations through production and reproduction. The collection of intact objects creates identities at particular locales. In addition, Chapman postulated the key notion of fragmentation, defined as the deliberate breakage of things, for the purposes of distributing relations (Chapman 2000). More recently, the interface between person and materiality was explored in a similar way: enchainment and accumulation were recast as "networking" and "layering" (Knappett 2006).

This triangular scheme of social practice (enchainment-accumulation-fragmentation) was refined and widened by Gamble (2004). Enchainment and accumulation were postulated as social practices and were materialised via fragmentation, which was now dubbed social action. In addition, the social action of consumption was introduced as a complementary way

of creating relations. Fragmentation and consumption are the traceable means of recovering both modes of past social life, enchainment and accumulation, which would in turn have a double applicability to identity creation (dividual and/or individual form of personhood).

With these reworkings, the scheme could be now better visualised as a rectangular (Fig 3.1). The novel notion of consumption is the using up of things, for the purposes of creating relations. Both fragmentation and consumption are involved in the social practices of accumulation and enchainment. Fragmentation can create links (enchain) through exchange as well as produce homogeneity out of different elements through accumulation and the same goes for consumption (Gamble 2004, 2007).

Nonetheless, a degree of frustration in terminology remains. In the first fragmentation book, the confusion was centred around the seemingly interchangeable use of the notions of fragmentation and enchainment (Chapman 2000: 222). This lack of distinction is perpetuated by Knappett in his attempt to exemplify the complementary nature of the two social practices (he speaks of accumulation and fragmentation, while he is actually describing enchainment) so as to go *in tandem* with his own social modes of layering and networking (Knappet 2006: 248).

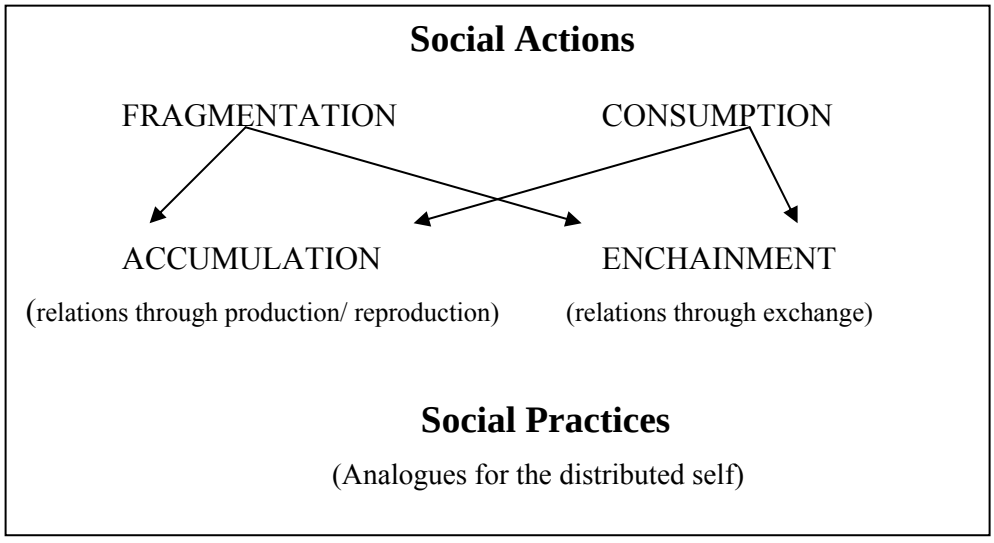


Figure 3.1: Schematic diagram of Chapman's model of fragmentation theory (2000) with Gamble's amendments (2004)

In the second fragmentation book (Chapman and Gaydarska 2007), the inconsistencies regard what exactly constitutes social practice. The tripartite scheme is still in use because the proposed addition of the concept of consumption was deemed unnecessary. The argument is that consumption is implicitly present in accumulation (*ibid*: 7). All three notions of enchainment, accumulation and fragmentation are mostly referred to as (social) processes and occasionally practices. I find the clear distinction between social practices and actions a helpful construct that promotes consistency and I intend to use it in my subsequent methodology.

For the anthropological model of personhood which proposes that people are made up of the totality of their relationships and they are hence not so much individuals as dividuals, the theory of fragmentation offers a viable methodology for prehistory (Jones 2005 for personhood and Neolithic architecture; Brück 2006 for personhood and Bronze Age settlement and funerary practices; Skourtopoulou 2006 for personhood and Neolithic intra-site stone tool analysis).

By way of conclusion, I will go back to the key objective of this thesis and bring together the theoretical veins presented in this chapter. Identity negotiation through material engagement in the European Lateglacial is to be observed and interpreted through the lens of social explanation and agency. The late OIS2 lithic assemblages will be viewed as co-authors of social actions along with the other operators of material culture, the individuals who manufactured and used them. Once rooted, the social relations amongst Final Upper Palaeolithic hunter-gatherers must have been maintained. Enchainment through fragmentation could be a way to sustain and strengthen them.

Objects' life histories being indicative of objects' social interaction with people can be approached through the fragmentation theory. The deliberate breakage of artefacts, or of human skeletal remains for that matter, provides the metaphor for the social practice of enchainment; the various fragments act as tokens of the agreed relationship, of the wished interaction probably across time and space.

The materiality of lithic artefacts (which is of interest to this thesis) is, therefore, imbued with the knowledge not only of the transformation process (technological knowledge of knapping techniques), but further of the origins of the materials. Subsequently, materiality incorporates a process where the single object represents materiality, at a particular stage in

the transformation process, consequently conveying the knowledge implicit in the chain of process that objects are a part of. Material expressions are steps in a process of becoming, and work like a chaîne opératoire, a sequence of production, where the knowledge of the full process resides in each part. In this way, materiality is material imbued with the knowledge of a process of transformation, knowledge of the single objects as part of a larger whole. The reduction of flint from nodule to tool involves social and psychological connotations alongside the technical ones.

3.7 SUMMARY

In this chapter I raised issues concerning past human identity. I argued that any attempt to approach and explain lives at a time remote from the present should incorporate understandings about what it meant to be human. The notion of identity is very complex. Ethnographic studies have demonstrated how difficult and complicated is the delineation of contemporary identity mainly because of its culturally and temporally constructed nature. This can only imply the degree of uncertainty entailed in such a task when targeting the past. Furthermore, I suggested that the quest for identity should place the individual person in the centre stage of archaeological investigation. The traditional emphasis on the importance of the group, however, should not be altogether abolished. Attention could be placed on the relations and interconnections between the single and the collective, and the way they help create an ever-changing self-awareness. For this reason, I opted for the bottom-up approach to society and the network model of analysis as the most appropriate for the archaeological evidence with which I am concerned. I also explained the dichotomy between the rational and the relational theory of the cosmos. It is only the latter that can accept a hybrid culture of human and non-human relationships. The relational standpoint allows the issue of identity to take a more diverge course because it advocates that they can be multiple modes of personhood. I then discussed the concept of dividual and the relational construct. The pivotal role of the body in human identity led me to a presentation of social theories of agency. Finally, I put forward the idea that the segmented and partible self could be accounted for, in a metaphorical way, by an analytical model which brings together material culture and

personhood, namely fragmentation. In conclusion, my intention is not to suggest that dividuality is definitely the only layer of identity one could look for in the archaeological evidence. I think, though, that this possibility needs to be open, especially given the complexity and variability in what constitutes identity.

Chapters two and three were collectively devoted to theoretical constructions and models of interpretation. Chapter four offers a methodology that can viably bridge the theory presented thus far to the data of the subsequent chapters.

CHAPTER FOUR

Methodology

4.1 INTRODUCTION

In the preceding chapters, I laid out my research questions alongside a theoretical framework for a social archaeology within Palaeolithic research with the focus placed on issues of identity and personhood. I argued that the viewpoint people adopt for their surrounding world plays a pivotal role in the formation of their own self-perception. Moreover, the construction of a personal cosmology is not considered in a vacuum. Rather it is placed in a relational universe, where people interact with all of its constituent elements in a meaningful and purposeful way. The relations that emerge between persons and materials are reciprocal and make up both the driving force and the outcome of everyday life practices. Furthermore, I stated that the investigation of the interpersonal dynamics (between people and people and/ or people and Others) of the past calls for a social interpretational framework.

The purpose of this chapter is to outline the methodology that will enable the link between the material record (lithic artefacts, in this case) of the northern European Final Upper Palaeolithic and the actual people who created, used and interacted with it. What is needed here therefore is a construct similar to Bourdieu's "Theory of Practice" (Bourdieu 1977), which offers the means for engaging people with the material world. In Chapter 3, I already presented the notions of embodiment, *habitus* and agency as parts of a general theory of social practice. I also summarised the "Theory of Fragmentation" (Chapman 2000) in the belief that it is a successful archaeological model of social practice. I shall revisit this point further below.

In the rest of the chapter I will examine how the stone tools can be considered as an example of interwoven material culture and social practice. I will therefore set out to explore how the traditional study of lithic technology acquires a social significance, which can potentially extend our understanding of the situated construction of identity. It therefore

follows that I will pursue two strands of methodological strategy. The first will start with a necessary delineation and discussion of the concept of the chaîne opératoire and will then proceed to present the terminology and descriptive criteria used during the recording and the subsequent analysis of the material. The second will extrapolate from the stone tool production and use to the distribution and accumulation, within time and space, of lithics with associations that create social meaning.

4.2. FRAMEWORKS AND UNITS OF ANALYSIS

In Chapter 1, I introduced the sites that will form the case studies of this work, namely Hengistbury Head in southern Britain and Rekem in Belgium. Without reiterating the rationale behind their selection or foreshadowing their proper presentation and description in the respective chapters, I will mention the practical difference in the collection of the two data sets. The lithic assemblage from Hengistbury Head was recorded and analysed by the author based on museum study. By comparison, all the information concerning the lithic technology present at Rekem has been gathered from the published literature. While designing the methodological framework for the lithic analysis for this thesis, an effort was made to create a general framework that could work with both first-hand and secondary data. For this reason, the analytical attributes were kept under control and the examination followed a basic procedure of lithic analysis. In such a way, the documentation of the archaeological material is appropriately framed to allow a focus on practice, process and production of social meaning.

4.2.1 The concept of the chaîne opératoire: some remarks

This section mirrors directly my previous discussion regarding the selection of the appropriate unit of reference. In Chapter 3.3, I argued that the individual (stripped of its western connotations and put into a relational context) could and should be the starting point of any social investigation of the Palaeolithic record. I also argued for its non-exclusive interpretational use but rather for the individual serving as the basis for the ensuing upwards spreading dialogue with the group, the system, the collective. When this thread of thought is

moved to issues of explanatory frameworks of technology, the question touches, once again, upon their exact location.

In lithic studies, technological information is important because it allows the reconstruction of the whole operational sequence from raw material procurement to final discard, through manufacture and use. The concept of the chaîne opératoire, as introduced by Leroi-Gourhan (1964), has been adopted as a dynamic and new approach when compared to the rigid typological analyses that once prevailed. The undoubtedly important work by experts in technological studies has led to effective and fruitful replications and retrievals of lithic productions in a step-by-step succession (indicatively see Boëda 1994; Boëda et al. 1990; Pelegrin 1993; Schlanger 1996; Schurmans and De Bie 2007). The fundamental importance of the concept becomes evident by the fact that, despite its decade-long and rewarding use in both Old and New world archaeologies, its analytical potential and interpretative contributions are constantly redifined in an attempt to maximise their explanatory value (Shott 2003; Andrefsky 2009; Bar-Yosef and Van Peer 2009; Tostevin *forthcoming*).

As significant as chaîne operatoire studies are for our understanding of past behaviours and cognition, they tend to shed light on "assemblages" (e.g. Dobres 2000: 193 is juxtaposing assemblage chaînes to tool-types chaînes opératoires) as air-tight and self-contained units and consequently they are mostly related to small-scale issues of site-function, spatial organisation, structure and regionality. Even when the ordering of the operational sequences into different production stages reflects individual choices and technical decisions (as in the instances of responses to problems with the raw material at hand or knapping abilities), these are still invariably considered within the larger dominant scale of the "assemblage" (for notable exceptions see Pigeot 1990 and Fisher 2006).

In my view, when the framework of the chaîne opératoire is employed without being distilled through an agency-based, short-term approach, it loses part of its dynamic nature and is greatly reduced to another system of typology. For example, the mere description of the lithic production process neglects the social context of flint knapping with respect to the utilization of tools and ideas of mobility of toolkits and the human transfer of artefacts. This line of criticism rests on the observation that it very often erases the richness of human activity. Quantitative analyses, metric examinations and numerical tables can dehumanise the

purpose; without referring back to meaning-producing materiality, they refute the social aspects of technology (Chapter 2). Such endeavours regularly result in successful internal understandings of technological systems, which are nonetheless devoid of general contexts (natural, behavioural, temporal and social) that actually provide their *raison d' être* in the first place. In other words, what I am arguing for is a more socially attentive chaîne opératoire.

In recent years, there have been efforts towards a more critical viewing of the strict technological approach to lithics resulting in a progressive humanisation of the stone tool production. There is the tendency to integrate the results of the steady and considerable progress the chaîne opératoire approach has made on the technical front into social archaeology (for an excellent discussion of the pitfalls of the chaîne being used as another taxonomic system of classification see Bar-Yosef and Van Peer 2009). In this vein, the principle objective has become the intentionality at the base of the method, the uncovering of the person behind the stone (see Dobres and Robb 2000a and contributors therein; Perlès 1992; Pope and Roberts 2005).

My intention here is not to refute the relevance of the "assemblage" as a unit of analysis; such an attempt would not only be unproductive, but also misleading and fundamentally wrong. On the contrary, my stance is that the "assemblage" can and should serve as a meaningful frame of reference, as a material proxy for human behaviour (Coward and Gamble 2008) as long as it is not adopted in an untested and overgeneralised manner (Van Peer and Wurz 2006).

What I find problematic in the inherent connection between the chaîne opératoire and the "assemblage" is the underlying principle that individuals involved in the production of stone tools (because even when individuals are not selected as the overt scale of analysis, it has always been human knappers who made and used the tools) must have all used the same conventional conceptual scheme. Regarding this final point, the chaîne has been employed as a useful means to avoid the "finished artefact fallacy" (Davidson 2002), where the encountered tool morphology does not always represent the discrete procedural concept of past artisans (schéma opératoire). It seems however that this usefulness, achieved by the gesture-by-gesture reconstruction of the reduction sequence and its correlation to an initial conceptual desire, may be compromised when the "assemblage" is uncritically selected as the

only framework of generalisation without being at all informed by the "individual" as a conscious maker of technology. Against such a restrictive background, the chaîne may produce different explanatory attitudes towards technological or even morphological variation: at an exclusively "assemblage" oriented level, any observed product variability is likely to be attributed to rigid operational schemes, whereas an "individual" enriched level may interpret the variation as an idiosyncratic way of knapping. The use of lithic data as proxies for the Palaeolithic individual agent generates the potential to understand his/her role in the formation of patterns of technological variation and offers the prospect to illuminate aspects of past social dynamics implicated in cultural behaviours.

To sum up, there is no doubt that chaîne opératoire studies have advanced our understandings of past societies. However, I feel that they would be even more informative and useful if they willingly promoted and enhanced a dynamic interconnectivity between the individual and the collective. At this juncture, the shift of attention to the individual as a non-exclusive starting point can only offer more insights into the production and use process. My approach therefore contradicts Riede (2006: 53) who simplistically states that "contemporary agentive chaîne opératoire research has inherited the anti-scientific or anti-evolutionary sentiments from the post-modern and post-structuralist philosophers it claims allegiance to".

4.2.2 A socio-technical context for lithic analysis.

The dynamic context of the chaîne itself views the lithic record not as a series of static groupings but as a constituent part of human behaviour, incorporating mental, economic, environmental and social aspects. Additionally, artefact biographies and the application of lifecycle analogies to tools (section 3.5.2.2) have proved useful both in framing new questions and providing interpretations about the complexity of the human use of stone in the past and its active role in the construction of human and social identities.

The morphologically static stone tools of the archaeological record are actually dynamic articles of past material cultures because they contain recoverable traces of past social lives. Patterns within the assemblages indicate social choices and behaviours and provide a direct link with the people who manufactured and used them. It is the actual

diversity in forms, techniques and functions that gives precedence to the individual performance rather than the finished product. For example raw material decisions can demonstrate landscape knowledge and use, mobility patterns and social networking. Furthermore all kinds of technological choices (knapping methods, types of platform preparation, types of retouch for the production and use of specific tool forms etc) involve individual (and/ or group-) agency. These actions negotiate human personhoods, maintain and transform social identities over time and consequently forge social systems. For instance, the preparation of prismatic cores, the making and use of blades and composite tools can be regarded as social actions, which lead to the construction of personal and group identities and to the formation of hybrid social networks through social practices.

But how is the link between the archaeological data and past social practices formulated? How is the structure of social relations in Late Upper Palaeolithic times elucidated? I believe that chapter 2.4 of the thesis has already laid out the canvas for the retrieval of social meaning in the archaeological materiality. Equally, chapter 3 showed that theories of social practice, informed and enriched by the embodied notion of *habitus* and agency, situate lithic technological studies in a context of social meaning of variability. It is this socio-technical context of material culture that offers a window to past realisations of the social identities and structures that are constantly inter-validating and inter-altering. The term "sociotechnical" is employed here quite literally, equally emphasising its constituent parts, the social and the technological (for the origin of the term and a more sophisticated definition, see Pfaffenberger 1992: 498).

Technology is understood to be not so much a matter of *things*, but of *activities/ projects*, in which the technical and the social are very difficult to distinguish. Recent interpretative approaches to technological studies highlight these socially founded techniques and practices that are no longer considered as a means to an end. According to Dobres' notion of techné, technological performances are "the abstract and practical knowledge interwined with self and worldly awareness, all of which are <engendered> "*performed*" (my adding) by social agents during the corporeal and social engagement with the physical making and using of material things" (Dobres 2000: 52).

Of equal importance is the fact that technology does not randomly happen in a vacuum. As a teleological and sequential process that involves people, places and things, it

invariably results in webs of connections amongst them (Conneller 2008). People relate to other people through collaboration while fetching the raw materials or working them down to tools or through exchange of both ideas and artefacts; they also relate to the places they visit or the space they occasionally inhabit or the spot they occupy while they engage in specific technological activities; they finally relate to the things they find, make, use, discard, give, receive. With a focus placed on networks of associations and disassociations between such diverse entities, technology is elevated from a discrete domain of action to a social process that enables fluidity, hybridity and relationality in meaning, identity and things (*ibid*: 165).

4.2.3 Lithic Analysis

So far, the methodological framework dealt with the adoption of the most adequate analytical unit, that of the chaîne, and its placement within a social context. The final methodological consideration focuses on the more technical process of acquiring a viable system of classification. In chapter 2, I already made the point that relational and rational approaches need not be mutual exclusive, unless another dualism ensues. Consequently, the current work will not be complete without the application of a systematic analysis that will set forth the information and data needed for answering questions about the material construction of human personhood. After all, metric and non-metric morphological variables promote the organisation of the recorded material into manageable units that warrant speculation about the material past.

For the present lithic analysis, the attributes were provided by Inizan *et al.* (Inizan et al. 1992). Although precedence is given to technological traits, the retouched artefacts were classified to typological categories for the sake of simplicity, generalised descriptions and homogeneity with other similar analyses. The typologies used for this purpose are simplified versions of the ones put forward by de Sonneville-Bordes and Perrot (1954-56) and Demars and Laurent (1989), where applicable. First, the general recording criteria will be presented; then the rest of the adopted attributes will follow the binary division of primary (all the débitage products, that is unretouched blanks, including cores) and secondary (retouched artefacts, that is formal tools) technologies.

4.2.3.1 General Recording Criteria

Raw material type: in the British case study the raw material is exclusively flint, therefore the classification was grouped based on colour and clarity.

General Condition/ Patina: the state of the artefacts was recorded as fresh, patinated, heavily patinated, burnt, heavily burnt, burnt and patinated, and other.

Cortex Quantity: this varies from no cortex at all to completely or nearly completely cortical with intermediate amounts of more or less than fifty per cent.

Maximum Measurements: maximum length, width and thickness were recorded.

Platform Measurements: maximum length and width were measured

Platform Types: plain, dihedral, facetted, punctiform, cortical, mixed, rubbed, indeterminate.

Platform Preparation: presence of faceting.

Completeness: when the blank is incomplete an indication is given as to the surviving part (proximal, medial, distal, proximal and medial, medial and distal).

Intentional breaks: indication of presence.

Profile of blanks: where the completeness and the dimensions of the blank allow it, their crossection is described as straight, slightly curved, curved and unidentified.

Edge Damage: indication of presence.

Edge Trimming: indication of presence.

Cresting: these are further classified as unidirectional, bidirectional and indeterminate.

Dorsal Scar Pattern (DSP): for the recording of the direction of flake removals a descriptive scheme is applied. The flake scars can be removed from proximal, distal, lateral, two laterals and the possible combinations of these directions.

Core Tablets: indication of presence.

Core rejuvenation flakes: indication of presence.

4.2.3.2 Primary Technologies

These incorporate all unretouched knapping products, essentially blanks and the cores they originated from.

Artefact Type: blades/ bladelets, blade/ bladelet fragments, flakes, flake fragments, burin spalls, blade cores, flake cores, core fragments.

Core Type: After the initial categorisation into blade and flake cores, the classification is done on the basis of the number and location of the striking platform. Single platform, dual opposed platform, dual crossed platform, multi platform.

4.2.3.3 Secondary Technologies

This information is relevant to the intentionally modified tool population.

Tool Type: backed, endscrapers, burins, truncations, shouldered points, tanged points, composite tools, piercers/ becs, retouched burin spalls, denticulates

Type of Retouch: backing, abrupt, semi-abrupt, burination, multiple. Although the backing is in essence an abrupt modification, it is classified separately because of the significance of backed elements in Late Upper Palaeolithic tool inventories.

Extent of Retouch: continuous, discontinuous, partial.

Position of Retouch: proximal, medial, distal, left lateral edge, right lateral edge, both lateral edges, circumference, inverse, alternate.

Backed Profile: straight, concave/ slightly concave, convex/ slightly convex.

Truncation Type: straight, oblique, concave, convex, multiple.

Burin Type: single, double, dihedral, multiple.

Burin Platform: unprepared surface, break, truncation, retouch.

Artefact Type	**blades/ bladelets, blade/ bladelet fragments, flakes, flake fragments, burin spalls, blade cores, flake cores, core fragments.**
Retouch	yes/no
Retouch Type	backing, abrupt, semi-abrupt, burination, multiple
Retouch Extent	continuous, discontinuous, partial
Retouch Position	proximal, medial, distal, left lateral edge, right lateral edge, both lateral edges, circumference, inverse, alternate
Backed Profile	straight, concave/ slightly concave, convex/ slightly convex
Truncation Type	straight, oblique, concave, convex, multiple
Edge Damage	yes/ no
Tool Type	backed, endscrapers, burins, truncations, shouldered points, tanged points, composite tools, piercers/ becs, retouched burin spalls, denticulates
Maximum Length	
Maximum Width	
Maximum Thickness	
Burin Platform	unprepared surface, break, truncation, retouch
Burin Type	single, double, dihedral, multiple
Number of Burin Facets	
Core Type	Single platform, dual opposed platform, dual crossed platform, multi platform
Edge Trimming	yes/ no
Facetting	yes/ no
Cresting	yes/ no
Cresting Type	unidirectional, bidirectional and indeterminate.
Core Tablets	yes/ no

Flanc De Nucleus	yes/ no
Flint Type	black, grey, dark brown, light brown, indeterminate
Condition/ Patina	fresh, patinated, heavily patinated, burnt, heavily burnt, burnt and patinated
Cortex Quantity	no cortex, <50%, >50%, cortical/ near cortical
Broken	yes/ no
Intentional Break	yes/ no
Surviving Part	proximal, medial, distal, proximal and medial, medial and distal
Distal Termination	feather, step, break, retouch.
Profile	straight, slightly curved, curved and unidentified
DSP	proximal, distal, lateral, two laterals and the possible combinations of these directions
Platform Type	plain, dihedral, facetted, punctiform, cortical, mixed, rubbed, indeterminate.
Platform Length	
Platform Width	

Table 4.1: Selected criteria for the lithic analysis.

4.3. AN ARCHAEOLOGICAL MODEL FOR SOCIAL PRACTICE.

4.3.1 A Matter of Microscale

Attention has already been paid to the selection of an appropriate scale for the present study and it will be so once more. In chapter 3, I gave a detailed presentation of the "bottom-up" approach, which results from the many options that can be exercised by individuals as they construct their social networks (Gamble 1999, 2007; Burke 2008). This argument was further employed to highlight the need for the technological aspect of material culture, as

exhibited by the concept of the chaîne opératoire, to be more focused on the individual as a social actor.

The quest for an archaeological model of social practice, which forms the second leg of this methodology, is benefited from this "micro" approach. At its heart, lies the premise that Palaeolithic hunter-gatherers exist through the creation and maintenance of a series of encounters with resources and people on a social landscape. Gamble calls these encounters, where materials are modified and deposited and information is exchanged, "networks" (1999). Materiality is inherent to them as are social relations and social reproduction. These, in turn, are successful and meaningful "only through the agency produced within the daily microscale of mundane acts" (Skourtopoulou 2006: 54). It is exactly this logical thread starting from individuals, moving to their socio-material networks, passing through the agency of persons, groups and things that resides in the social practices, that culminates in the complementary processes of "enchainment" and "accumulation" (Chapman 2000, 2007).

I do not wish to analytically describe these notions and the consecutive scheme derived, as this has been done earlier (Chapter 3; Chapman 2000, 2007; Gamble 2004, 2005, 2007; Knappett 2006). Nonetheless, for purposes of reading facilitation and argument coherence, I shall only focus on their usage as methodological instruments for a potential reconciliation between the static nature of material culture with the fluidity of identity. "Enchainment" is the process whereby relations between humans and artefacts are achieved through distribution and exchange in socio-technical networks. "Accumulation" refers to the creation and maintenance of relations through production and reproduction at particular locales. The two processes, though distinct, may be complementary in that they describe two different practices in which objects mediate relations between people. Archaeological signatures of enchainment would be materials carried or transferred in locales through extended networks. Also the opposite situation could manifest enchainment: material taken away from a locale in order to be distributed elsewhere (in an otherwise complete knapping sequence, where only the end product is missing, we could assume that the finished item was removed). The giving and receiving shape networks, chains of links, which distribute the sense of the person in time and space. On the other hand, obvious archaeological examples of accumulation are the various collections of objects, which need not be materialised with the advent of metallurgy (Gamble 2004 contra Chapman 2000: 43, who sees the beginning of

accumulation practices only in the hordes and "treasures" of metal objects). Finally, accumulation does not only refer to objects. It does so to all resources of social life. For example, we have the bringing together of hunters, knappers working collectively, the group of foragers on an expedition to a raw material source, the set of stone tools.

The process of "enchainment… the succeeding chain of personal relations… that is carried out via the exchange of complete artefacts or their fragmented parts and vice versa, the accumulation of (personalised) objects in order to retain… values…" (Chapman 2000:5, my omissions) are practices embedding not only the transformation of the past via the social relations of the present (Skourtopoulou 2006: 55) but also social identities. Such social practices offer meaning to materiality as well as they elucidate the critical dynamic between the human and the material.

4.3.2 Archaeological social practice beyond the microscale

A few final remarks are reserved for the resolution of the tension between the scales of reference. The friction between the micro- and the macro-, the individual and the collective, be it in a social or even a technological context, can be resolved by the social practices described and the resulting social identities. The adoption of the bottom-up approach does not overlook the fact that social contact and interaction occurs at multiple scales ranging from individuals to larger populations. Once rooted in the mundane, social practices and fluid identities can spread upwards and thus consolidate and reaffirm interactions and links at a wider level. Based on the premise that all material culture has the potential to underwrite social relations, social outcomes are achieved and reinforced, consciously and unconsciously, and in that way boundaries between groups are forged and are collapsed. In terms of material culture this accounts for "styles", whereas in spatial terms this translates to "regionality" and regional traditions (Wobst 2000).

4.4. SUMMARY

The analytic strategy proposed here has a dual nature: it deals as much with the physical aspects of the lithic artefacts (4.2.3) as with the theorisation of the social behind the material (4.3).

The section describing the methods for the data recording and analysis also contained a critique of the technological framework of the chaîne opératoire (4.2.1). I argued that as an analytical tool, it would be benefited from the incorporation of the individual in its context. Its traditional relatedness to the unit of the assemblage, as a legitimate and useful framework as it may be, may miss or misinterpret aspects of patterned variability, when the individual is omitted as a potential source.

The last part of the methodology is concerned with the interpretative potential of the Final Upper Palaeolithic material data. A model for a theory of practice is adopted so that lithics can partake in human identity construction. In this chapter, as in the whole thesis, major issues like agency, chaîne, and style reside in the small, the short-term, the mundane; the individual is selected as a generic unit of reference in contrast with the collective of the system. There is little doubt that there is dialogue and reciprocity between the two units. Nonetheless, what is of interest here is the starting point. The resulting interpretative framework therefore starts at the bottom and spreads upwards.

This chapter completes the first part of the thesis, which put forward the research questions and suggested a theoretical and methodological framework for their contextualisation and interpretation. I will now turn to the archaeological record of Lateglacial north west Europe and discuss two case studies from Britain and Belgium.

CHAPTER 5

Personhood during the Final Upper Palaeolithic in Britain

5. 1. INTRODUCTION

The previous two chapters combined ideas from anthropology, social theory and lithic analysis to offer an analytical theoretical framework and a practical methodology for the study of the formation of human identity. The underlying concept was to provide potential links between objects of use and the social practices involved in both technological processes and products. This highlighted the fact that, alongside their practical significance, elements of material culture can also be ascribed to a multitude of meanings and functions. Furthermore, it was suggested that the hunter-gatherers of the Lateglacial were human persons in constant negotiation of their being through contextual and networked relations with elements of their world. The implications of this statement counteract the generally embedded western concept of viewing hunter-gatherers as not being part of our sociocultural ancestry, at least not in the way that later farmers are (Dolukhanov 1989; Marshall 2006).

In this chapter, a case study from the Final Upper Palaeolithic of southern England will be examined. The lithic assemblage from the open air site of Hengistbury Head will be analysed. The following sections will give an essential background to relevant archaeological issues (5.2), provide a rationale behind the selection of Hengistbury Head (5.3), then offer a detailed description and analysis of the associated lithics (5.4 and 5.5). Finally, a discussion of issues touching upon the materialisation of personhood through stone tools will take place (5.6).

5.2 ARCHAEOLOGICAL BACKGROUND

During the peak of the last cold stage (~20,000 years ago), Britain was devoid of human population as was most of northern Europe. Once the climatic conditions in northern Europe began to ameliorate just before 15,500 calendar years ago and the ice retreated,

hunters returned expanding from the temperate refugia of south-west France and north-east Spain. It is estimated that the re-colonising population size reached almost 29,000 hunter-gatherers (Bocquet-Appel et al. 2005). The resettlement of Britain is still discussed within the general debate about the exact time and manner of the post-LGM northwards human spread (Housley et al. 1997; Terberger and Street 2002; Barton et al. 2003; Blockley et al. 2006). In terms of its archaeology, the record of the Lateglacial Interstadial can be divided into two broad sub-phases: the Late Upper Palaeolithic, which is known as the *Creswellian,* and the Final Upper Palaeolithic, which in turn exhibits at least two distinct variants, the so-called *Penknife Point* and the *Long Blade* assemblages (Pettitt 2008; Barton 1997; Conneller 2007:217-218). A very schematic synopsis is given in Table 5.1.

To date, there is approximately a total of 150 Lateglacial find-spots in England and Wales: of them, only 28 are attributed to the Late Upper Palaeolithic industry of the Creswellian whereas the majority date to the more recent and internally more complicated Final Upper Palaeolithic (Jacobi 1997).

Generic division of the arch. record	Technocomplex	Chronostratigraphy	GRIP	Uncal BP	Cal BP	GRIP Ice Core Years
Late UP	Creswellian	Bölling	GI-1e	13000 – 12000	15500-14000	14700-14050
Final UP	Penknife Point *(plus straight-backed)*	Alleröd	GI-1c – 1a	12000 – 11000	14000-13000	13900-12650
Final UP	Long Blade (*just before 10,000 BP*)	Younger Dryas	GS-1	11000 – 10000	13000-11500	12650-11500

Table 5.1: Schematic representation of the British Lateglacial archaeological record

5.2.1 Late Upper Palaeolithic: The Creswellian (single & double truncated backed pieces)

The focus of this chapter, the Final Upper Palaeolithic (FUP), forms only the last part of the British Lateglacial archaeological record but it cannot be meaningfully discussed outside the broader context of what preceded it. The earliest evidence for Lateglacial human activity come from a cut-marked wild horse vertebra from Gough's cave, Somerset (OxA-3413: 12,940 ± 140 BP) (Barton 1999a) and from a cut red deer metatarsal from Layer 13 in the same site (OxA-466: 12,800 ± 170 BP) (Jacobi 2004)[3]. It is true that both these age determinations are being met with scepticism (Barton 1999a, 1999b; Barton and Dumont 2000) because they indicate a much earlier human presence than the one unequivocally established by the majority of radiocarbon estimations. The relatively recent corpus of AMS dates corresponding to Creswellian sites[4] suggests that almost all the determinations fall within the time span of 12,600 – 12,000 BP (roughly 15,000-13,950 cal BP). This is in agreement with the climate warming initiated by the first Lateglacial interstadial (Bölling or GI-1e). The acceptance of the two earliest dates from Gough's Cave could interpret the reoccupation of Britain as a process somewhat synchronous with the repopulation of mainland northwestern Europe rather than one similar in nature but chronologically succeeding. This evidence fits well with the initial pioneering phase of the proposed model by Housley, Gamble and colleagues (1997).

The first British Late Upper Palaeolithc (LUP) lithic tradition is the Creswellian. The name was given by Dorothy Garrod after the type site of Creswell Crags, Nottinghamshire. In her original classification (Garrod 1926), she was trying to demonstrate the substantial differences of the British Upper Palaeolithic from both the broadly contemporary, but geographically distinct Magdalenian of south-western France and from the chronologically distant Upper Aurignacian (Jacobi 1991: 131).

The characteristic backed forms of this lithic industry are traditionally subdivided into single truncated (triangular) Creswell points and bi-truncated (trapezoidal) Cheddar points (Bohmers 1956: 11; see Fig. 5.1). However, in subsequent revisions, and in an interesting

[3] These age estimations, when calibrated, become 15,748 ± 470 BP and 15,342 ± 484 BP respectively.
[4] For comprehensive lists see Barton 1999a, Barton and Dumont 2000.

name twisting manner, it has been proposed that the hallmark of the Creswellian should be the Cheddar point (Jacobi 1991; Barton and Roberts 1996; Jacobi 1997; Barton 1999a; Barton et al. 2003). For the sake of simplicity, the all-inclusive term will now be the Cheddar point, defined by a pair of oblique truncations and backing along the shorter lateral edge between them; the traditional Creswell point with one truncation and backing will be seen as a variant (Barton and Dumont 2000). A note should be made here that even further variants have been added (Jacobi and Roberts 1993) and the typological distinction between Creswell and Cheddar points is still very much applicable (Jacobi 2004). As for their use, recent analyses of similar backed blades from the site of Zeijen in the Netherlands have confirmed that they were hafted and that they were used as projectiles (Rots et al. 2002). The British cases do not exhibit traces of hafting but there are instances, as in Gough's Cave, of scalar damage close to the tip that is consistent with this projectile function (Jacobi 2004: 41).

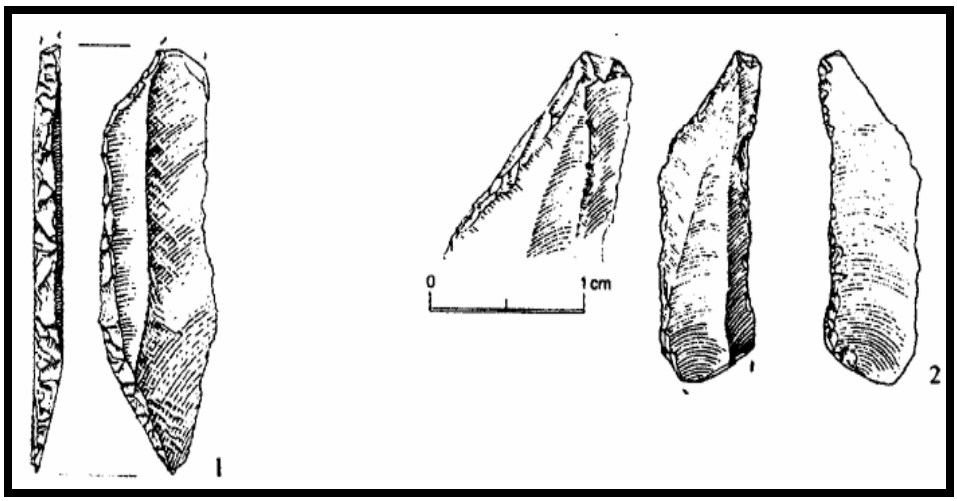


Figure 5.1: Number one is a Cheddar point (trapezoidal outline), the now proposed hallmark of the Creswellian; number two is a Creswell point (triangular outline, single truncation). Artefacts from Three Holes Cave, Devon. Modified after Barton and Roberts 1996: fig. 4

The tool inventory of the Creswellian also contains end-scrapers on long straight blades; burins, mostly on truncation; piercers and becs, which may include Zinken; "Magdalenian" blades (truncated blades with lateral retouch); truncated blades with heavily worn, often rounded ends (*lames tronquées*); splintered pieces (*pièces esquillées*) (Jacobi 1997). Other characteristic features of the blade débitage include long, slightly curved blanks

in profile, a preference for single platform cores, frequent use of soft hammers, and extensive preparation on the blade butts with faceting and *en éperon* technique (Barton and Dumont 2000). In terms of raw material procurement, the Creswellian exhibits a preference for good quality flint capable of producing long, straight blades. Where local flint sources are not available, material is imported from as far away as over 100 km. The frequent absence of *in-situ* decortication activities (cortical flakes, primary flake and blade waste) suggests that for reasons of economy, the transportation of raw materials was done in the more manageable forms of ready made blades rather than big heavy nodules (Barton 1999b: 190).

Recently, the sole presence of the trapezoidal backed pieces as a diagnostic marker for the Creswellian has been questioned because of their occurrence in well-stratified Final Upper Palaeolithic (FUP) contexts with either curve-backed or straight-backed blade assemblages (see below) (Barton et al. 2003). For this reason, for assemblages to be recognised as "Creswellian" most, if not all, of the above-mentioned characteristics must apply (Barton et al. 2003: 633).

To date, the exact number of Creswellian findspots fluctuates between 28 (Barton and Dumont 2000; Barton 1999b) and 35, which could even drop to 24 depending on how strict the diagnostic criteria are (Barton et al. 2003). It is worth noting that all of them have been identified in England and Wales, with the northernmost extent reaching the midlands (Robin Hood Cave, Pin Hole and Church Hole) (Barton 1999b). The sites are generally restricted to caves but there is a growing number of open-air sites which can be morphologically or technologically associated with the Creswellian (Jacobi 1997). What is interesting is an apparent correlation between the location of Creswellian sites and the edges of the upland margins. This link with the upland zones is a pattern that can also be recognised in the continental Magdalenian, in both areas with caves and cave-free regions such as the Neuwied Basin (Barton et al. 2003: 637).

The affinities of the Creswellian with the Magdalenian are still a matter of debate. According to one view, the former is a late variant of the latter (Jacobi 1991: 138; Barton and Roberts 1996; Barton Jacobi et al. 2003: 639; Pettitt 2008), whilst another interpretation favours a separate origin and an independent evolution (Campbell 1977). The forms of the British technocomplex differ from the classic Magdalenian in the absence of microlithic backed bladelets (Jacobi 1991: 138), in the unique occurrence of trapezoidal backed pieces

and in the complete absence of cut-marked reindeer fauna (Barton 1999b: 74-75). The strong similarities between the two industries mostly lie in the organic artefacts (Jacobi 1991; Barton 1999b).

5.2.2 Final Upper Palaeolithic

5.2.2.1 Curve-backed Pieces

The Creswellian is not the only British Lateglacial lithic technology. Since the first classification of the British Upper Palaeolithic, Dorothy Garrod identified assemblages containing higher percentages of curve-backed[5] forms than the "classic" elongate trapezes. In her monograph, she called them Penknife points, in accordance with the Azilian (characterised by curve-backed bi-points), and attributed them to a "late Creswellian" phase (Garrod 1926)[6]. Sixty years later, John Campbell, also taking into account varying proportions of different backed tools in British collections, proceeded in recognising four sub-divisions to the Lateglacial: the exhaustively sub-divided Creswellian, spanning pretty much the totality of OIS2 from about 25-10,000 BP (~30,000-11,500 cal BP); the Hamburgian, which could be seen as a variant of the Middle Creswellian; the Ahrensburgian, whose existence relied on only one site; and a Long Blade Technology, *sensu lato* (Campbell 1986: 22-33). However, the picture of the internal technological and chronological sequencing of the British Lateglacial became clearer only relatively recently thanks to the advent of AMS dating and the undertaking of new archaeological work. Thus, to account for typologically diverse non-Creswellian assemblages clearly dated to the second half of the Lateglacial Interstadial (GI-1c – 1a, the Alleröd of the 12th millennium) the generic term Final (Upper) Palaeolithic was proposed (Barton and Roberts 1996: 252).

The lithic record associated with the cooler, forested environment of the Alleröd is more diverse than the immediately preceding one. The typical backed forms are now curve-

[5] Another term in the literature is "arch-backed pieces" often used in association with the *Federmessergruppen* of northwest Europe; both terms are equivalent to the French "pièces (pointes/ lames/ lamelles) à dos courbe".
[6] In this chapter I shall use the term curve-backed point/ piece as a generic one and I shall reserve the term penknife for the pieces that are abruptly retouched along one convex lateral edge with "modification (oblique truncation, concave retouch, shoulder) to the proximal part of the other edge" (Jacobi 2005, 272).

backed blades and curve-backed points (Fig. 5.2) and they can be further subdivided on the basis of symmetry (pointed at only one end, or both ends - the Azilian bi-points) and invasiveness of retouch (Barton 1999a: 76). Garrod's fossil-directeur, the penknife point, is seen as a variant of the curve-backed point: asymmetrical with additional basal retouch (Barton 1999a: 80). As mentioned before, the angle-backed trapezoidal forms which dominate the record of the previous period still occur in combination with curve-backed points. The FUP also contains short end-scrapers, burins on truncation, and round thumb-nail scrapers (unguiformes).

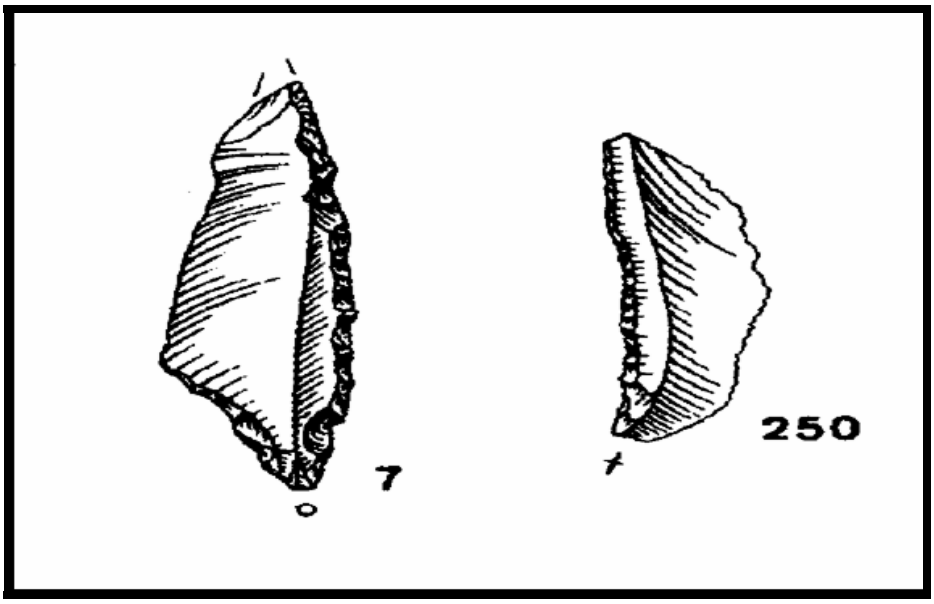


Figure 5.2: Number 7: penknife point (curved-backed); number 250: straight-backed blade. Artefacts from Three Holes Cave, Devon. Modified after Barton and Roberts 1996: fig. 8

However, the tool kit of the period is not restricted to curve-backed artefacts. Often contextually associated, and therefore presumed to be contemporary, are collections dominated by straight backed blades/ bladelets and shouldered points (pointes à cran). To date, the two most important such collections come from the open-air sites of Hengistbury Head (Dorset) and Brockhill (Surrey) (Barton 1999b; Barton & Dumont 2000).

The dating of FUP assemblages is problematic on two grounds. The first concerns its chronological relation to the Creswellian, and this is linked to the nature of the Creswellian-FUP succession. Was the latter a direct local development or did it evolve outside Britain and

subsequently replace the former? The second is the questionable issue of sequencing within the FUP. The evidence for dating the FUP comes from a limited number of locations with characteristic curve-backed industries in south-west (Devon) and central Britain (Derbyshire). A recent study of AMS dates (Barton 1999a: 81, especially fig.7 and table 2) has shown that the curve-backed point phase post-dates the Creswellian. From the cluster of sites in the Torbryan Valley, south Devon, Broken Cavern gives a date of 11,380 ± 120 BP (OxA-3887; 13,287 ± 163 cal BP) which agrees with the dates from the adjacent sites of Three Hole Cave and Torbryan 6. At the near by site of Pixie's Hole, the younger of two determinations falls close to the Torbryan Valley dates; the earlier one (OxA-5795 11,910 ± 90; 13,829 ± 178 cal BP) may suggest a human use of the cave over a lengthy time span. This scenario is also supported by the similarly old determination of 11,790 ± 90 (OxA-5858; 13,694 ± 153 cal BP) from Mother Grundy's Parlour (Creswell Craggs, Derbyshire) (Barton 1999a). At this point, I feel a note should be made that the already limited data set is coming from only five caves, three of which are immediately adjacent and the fourth is in very close proximity.

It is true that the FUP dates seem to leave open the issue of the temporal interval covered by each of the two Lateglacial traditions. A brief review of the assemblages at Gough's Cave and Aveline's Hole (Jacobi 2004) shows that both cave sites combine trapezoidal backed forms with curve-backed shapes, though in different ways. Gough's presents single and double truncation backed pieces and curve-backed points, in the absence of penknife points. In Aveline's Hole, the curve-backed element is complete with its variant and it is the single angled backed trapezes (Creswell points) that are missing. The radiocarbon determinations for both sites are quite similar and they place them at the first half of the Lateglacial Interstadial. The only difference is that the human occupation at Gough's covers a very long time-span, "potentially over a thousand radiocarbon years and therefore equivalent to the Bölling" (Jacobi 2004: 49). The two determinations from Aveline's fall near the end of this phase of the Interstadial. So what can be made of this typo-technological coexistence? In my view there can be two interpretations. Either the curve-backed points were not a different entity to the Creswellian, or they were a parallel, autonomous and contemporaneous industry. Given the "considerable uncertainties… of the vertical distribution at Gough's Cave of curve-backed points as compared to those of the

bitruncated trapezoidal backed blades" (Jacobi 2004: 69) and the late temporal overlap between Gough's and Aveline's, I would say that in any of the two above mentioned scenarios, the curve-backed pieces co-existed with the Creswellian (either as an integral part of it or as a separate entity) only during the closing of the GI-1e (Bölling). For the second warmer half of the Interglacial onwards (GI-1c-1a), the curve-backed assemblages can be said to define the FUP as a legitimate entity separate from the Creswellian. I think that the presence of the penknife variant in sites that are more recent than Gough's Cave may also attest to that conclusion.

Within the British Lateglacial record, the industry with the most findspots is the FUP. Approximately 39 of them are associated with strict finds of curve-backed points. Apart from being numerically superior, they also include a higher percentage of open-air sites and share a much wider geographical repartition extending from Cumbria to the Scilly islands (Barton and Roberts 1997: 514).

5.2.2.2 Long Blades

Quite often the Final Upper Palaeolithic (FUP) also extends to the last Stadial of the Pleistocene (the GS-1, corresponding to the continental Younger Dryas or the Loch Lomond Stadial of the British Isles; 11,000 – 10,500 uncal BP) to incorporate the later lithic tradition of the long and bruised blades (Barton 1999b; Barton and Dumont 2000).

After about 10,800 uncal BP climate deteriorated significantly, with the much colder conditions allowing for the development of open-tundra environments. The absence of radiocarbon dates during the most intense cold peak (10,500 BP) may well suggest another abandonment of Britain, similar to that of the LGM. Re-occupation in southern Britain appears after 10,300 BP accompanied by a completely different technology. This last phase of the FUP is characterised by a lack of standardisation and the dominance of long blades. These are blades greater than 12 cm in length, often exhibiting invasive battering scarring patterns on both lateral edges. They are often termed bruised blades, and their damage is either attributed to chopping antler or to making soft hammer stones. Therefore the findspots containing them have been respectively interpreted either as butchery sites or as knapping floors (Barton 1997: 131). In terms of continental affinities, this type of long and bruised

blades is also a common feature of the Ahrensburgian technocomplex, which dominates the Younger Dryas Stadial in northern Europe. Finally it is noteworthy that some of the FUP industries are associated with elements typical of the succeeding early Mesolithic period. These would include microlithic projectiles, bladelets and bladelet cores. Until recently, the British long blade sites were centred on the southern and south eastern parts of the country (Barton 1997). However, new discoveries in the north of England and the East Midlands (the sites of Vale of Pickering in north Yorkshire and Launde in Lincolnshire respectively) broaden the geographic distribution of long blade assemblages (Conneller 2007; Cooper 2006).

To conclude, the British FUP is characterised by a much greater diversity in backed tool forms (straight backed, curve-backed, angle-backed) compared to the LUP (Creswellian). One more difference lies in different raw material practices and technological strategies. The small sized artefacts are very often made on local material of variable quality. Due to their convenient size the nodules could be easily transported as a whole and knapped in-situ from the very beginning (Barton and Roberts 1997: 513).

5.3 HENGISTBURY HEAD: WHY SELECTING IT AS A CASE STUDY?

So far this locality has been mentioned briefly in connection to the problematic sequencing within the British Lateglacial record. It is an open air site characterised by the predominance of straight-backed blades and bladelets. This feature is virtually unknown in Creswellian assemblages, whereas it is very typical of the continent: typologically, both the late Magdalenian and the succeeding Federmesser industries have a very strong straight-backed element. Matters are not being helped by the fact that the British sites are, effectively, undated. Hengistbury Head has produced a combined mean TL date of 12,500 ± 1150 BP (15,021 ± 1554 cal BP) based on burnt flints (Barton 1992). However, the very wide standard deviation does not render this estimation very useful. Arguably, Hengistbury could fall anywhere between the Creswellian (LUP) and the Penknife Point (FUP) chronological spectrum and overlap with both groups.

More explicitly, the several issues raised by the site are:

- Is the observed differentiation in lithic typology associated with the type of the encampment (cave sites versus open air sites)[7]?
- Chronologically, does this assemblage bridge the divide between LUP and FUP?
- Or does it overlap with the Creswellian (a kind of variant, especially since Hengistbury contains a number of shouldered points)?
- Or does it post-date the Creswellian and is an early phase of the FUP, similar to the internal chronological ordering of the *Federmessergruppen* of northern Europe (Barton 1999a: 82-83)?

Furthermore, in a broader context, the question of temporal and/or cultural affinities between the British and the neighbouring northern European Lateglacial archaeology could be added.

However, I believe that these important questions may be based upon somewhat arbitrary divisions of material culture. It is accepted, for example, that the FUP is not a clear cut from the Creswellian. On the contrary, there are LUP elements that are incorporated in the industries of the second half of the Interglacial. Similarly, the final stages of the FUP are not unconnected to the microlithic tradition of the succeeding Mesolithic.

So perhaps the most significant aspect of revisiting Hengistbury is not to successfully overcome the chronological uncertainties and the typological idiosyncrasies. Rather it could be the opportunity to explore patterns in material culture that can relate to the negotiation and performance of identities. Such a performative/ relational dimension of the involved lithic technology poses the above questions of "when", "how" and "from where" in a different context and it therefore produces answers regarding a materially mediated and networked personhood. In other words, the site has been selected despite its problematic dating and because of its ambiguous place in the cultural ordering of the British Lateglacial in order to serve as an example where the construction of the person can be archaeologically attainable. I will return to these issues later with the general discussion of the site (section 5.6).

[7] There is however a very small number of open air sites that are believed to be Creswellian, like Newark and Foggatt.

5.4 HENGISTBURY HEAD, DORSET

5.4.1.Location, dating, history of investigation

Hengistbury Head (HH) is situated in southern England, some five miles east of Bournemouth in Dorset. It forms a major promontory which projects into the Channel and partly flanks the western entrance to the Solent. On its northern side lies the protected harbour of Christchurch into which flow the major Wessex rivers of the Stour and Avon (Bergman and Barton 1986).

Figure 5.3: Location of Hengistbury Head, Dorset (50°43'00'' N, 01°45'00'' W)

The archaeological importance of Hengistbury lies in the fact that it is one of the very few open-air sites in Britain where a record of human activity can be traced from the Late

Upper Palaeolithic to the Iron Age. Its first use as a campsite appears to have occurred during the Lateglacial at about 12,500 BP. In the preceding section a mention has already been made about the problematic TL mean date of the site. The 12,500 ± 1150 determination has a very wide standard deviation, which makes it difficult to place it chronologically and interpret it accordingly. In the exhaustive monograph on HH, this initial human presence is attributed to the "Late(r) Upper Palaeolithic (Barton 1992). Since the monograph was published before the more detailed and helpful techno-typological sub-division of the Lateglacial record into LUP and FUP (Barton & Roberts 1996), it is safe to assume that dating of HH to the FUP (based on the straight-backed blade dominance) would be better suited.

The next evidence of occupation comes in the early Postglacial period about 9,700 BP when the headland was exploited by Mesolithic hunter-gatherer groups. The Final Upper Palaeolithic site is situated towards the south-eastern tip of the promontory and is separated from the Mesolithic site (also known as the Powell site) by a distance of about 650 m further to the west (Barton 1992).

Today, both these sites are situated close to the cliff-edge, overlooking the Channel. According to climatic and environmental evidence however, Hengistbury occupied an inland rather than a coastal position in the late Pleistocene. During the Lateglacial world sea levels were much lower than they are today because of the water still trapped in the ice sheets. As a result, Britain was connected to the rest of the continent through a major landbridge and Hengistbury was situated inland, overlooking the now submerged valley system of the Solent (Barton 1992).

The artefacts occur in about a metre thick windblown sand deposits which affect negatively good organic preservation such as bone and antler. The single archaeological horizon comprises a well-defined scatter of flints with pieces of red ochre and several flat fragments of sandstone (Bergman & Barton 1986: 69). The local flint on the headland derives mainly from cryoturbated Pleistocene gravels and occurs in the form of small cobbles marked with surface shattering. Also present at the site is flint which comes in nodules of bigger size and of well-developed cortex. Today, the nearest known source of such material is a Cretaceous chalk escarpment lying about 12 km south-east of the site on the Isle of Wight (Bergman et al. 1987: 230).

Although there are no structures found at Hengistbury Head, there can be little doubt that hearths were present, judging by the scatter of thermally fractured stone slabs and burnt flints amongst the occupation debris (Barton 1992: 198). As far as the spatial organisation of artefacts is concerned, at least two distinctive artefact clusters are discernable (fig. 5.4), which are several metres apart, do not overlap and show no interconnecting refits (Barton 1992: 160). In the NW of excavated area, there is a zone characterised by high proportion of backed tools, many of which are burnt. A second zone, about 5-7 m to the south east, displays a higher than average density of blade débitage and blade cores. This zone, designated South Central (SC), is typified by low quantities of tools and an equal scarcity of burnt artefacts. The majority of refitting artefacts come from this SC part of the site. A possible interpretation for the NW concentration is that of a hearth (backed tools are traditionally associated with hearthside activities; e.g. Bodu et al. 1990; Bodu 1996; De Bie and Caspar 1997); the SE zone would be a peripheral area where the production of blade blanks was taking place (Barton 1992: 198-99).

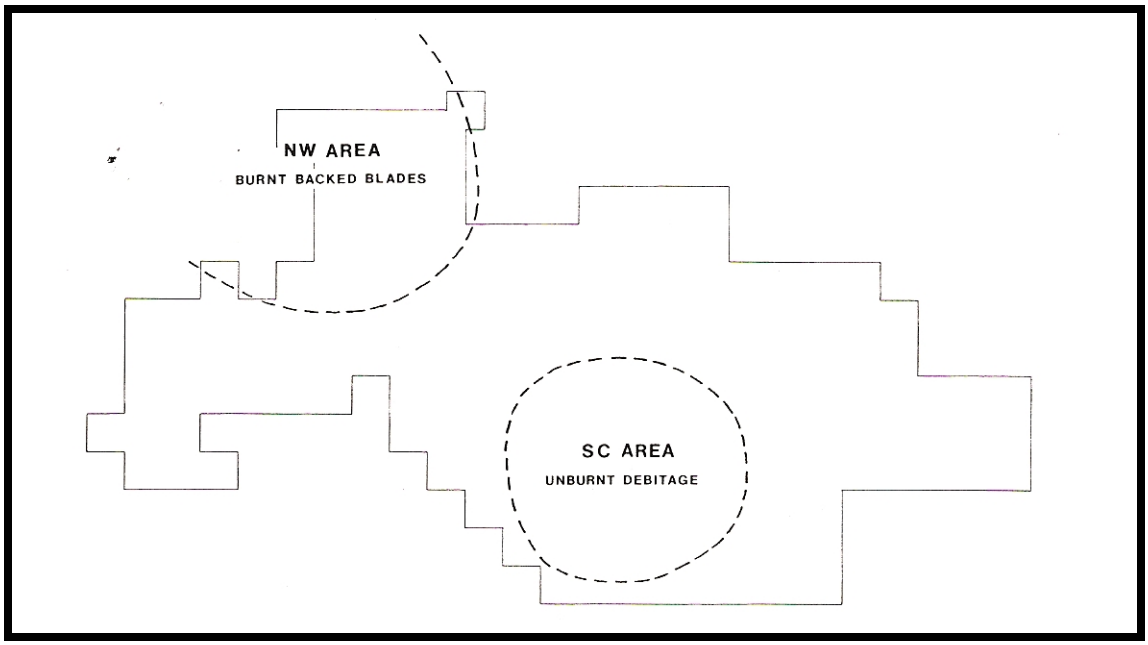


Figure 5.4: Hengistbury Head site plan with "activity areas": a blade manufacturing zone is recognised in the south central area; utilization of backed tools concentrated around the remains of a possible hearth is identified in the north-west area (Barton 1992: 198, fig. 4.74)

In brief, Hengistbury Head is interpreted by its excavator as an ideal seasonal hunting camp strategically placed on high ground between the Channel valley and the lower estuary

of the Avon and Stour rivers, so that hunters can intercept the spring migrating hoards of horse and reindeer.

To date, there have been three excavations at the Final Palaeolithic (see table 5.2). In 1957, Angela Mace, wanting to systematically investigate previous finds of a local archaeologist, excavated more than 71 square meters. She recognised a homogeneous industry of Late Upper Palaeolithic nature but distinct from the "Creswellian cave industries" (Mace 1959: 236, 238, 255). In 1968-69, John Campbell revisited the site and he dug up a total of 136 square metres. In his analysis, he interpreted Mace's finds as Mesolithic. Furthermore, he identified two distinct technological entities and therefore two occupation levels in the newly studied area; a Late Upper Palaeolithic and a Mesolithic level (Campbell 1977: 71, 179-180). The most recent fieldwork, led by Nicholas Barton, took place between 1981-4. A detailed analysis (including extensive refitting work) of the stone tools recovered from an area of around 96 square metres (Barton 1992: 9) proved beyond doubt that the Mesolithic activity is exclusively restricted to the nearby Powell site.

Year	Seasons	Excavator	Area		Flints	Tools
1957	1	A. Mace	71 m^2		3,060	254
1968-69	3	J.B. Campbell	136 m^2			123
				}	13,419	
1981-84	4	N. Barton	96 m^2			272
Total			**303 m^2**		**16,479**	**649**

Table 5.2: Combined excavation information from Hengistbury Head (after Mace 1959; Campbell 1977; Barton 1992). Surface collection items are not included.

The research so far undertaken in Hengistbury Head provides us with two snap-shots of the history of archaeological thought: the normative culture-historic and the Processual. The first two visits at the site painted a cultural picture of its use. In their respective publications, Mace and Campbell studied the débitage and the tools in order to locate HH in a specific "cultural" tradition. These endeavours led to two different approaches regarding the techno-chronological interpretation of the site (only a single LUP occupation; two horizons: one LUP and one Mesolithic). Mace's accurate conclusion was drawn after a succinct and purely typological lithic analysis. Campbell discussed HH in the wider context

of British Upper Palaeolithic. The whole approach in this work still views the "social" as "cultural" (see section 2.2), but additionally it follows the spirit of its times and incorporates some Processual tendencies. The most recent work at HH, though it did not abolish the cultural aspect of its significance, especially when it comes to interpreting affinities with the European mainland, places its emphasis on a clearly processual, inter-disciplinary paradigm. In the monograph, Barton's very detailed examination of the lithics, along with spatial organisation and extensive refitting studies, is an excellent account of how to regard and interpret every social element through a rational, as opposed to a relational, way (also see discussion in section 2.6).

The rest of this chapter will concentrate on analysing a representative part of the HH stone tools in a rather different way. To be more precise, the analysis itself will still be "rational" since it cannot do away with the all important techno-typological definitions and measurements of the artefacts. This information can be linked to research questions concerning the possible aspects of personhood of the hunter-gatherers who visited the site and left their material culture behind. The basic idea is to demonstrate a more "relational" viewpoint, one that will investigate the importance of the routines people enacted on a daily basis in order to understand and assert themselves. These routines are not so much connected to individual decisions which can be interpreted as answers to external stimuli such as raw material availability, apprenticeship signatures or cultural/ethnic markers; they rather serve as indicators of constructing personal identities via social enchainments, both actual and metaphorical.

5.5 DESCRIPTION OF THE ASSEMBLAGE

The reason for revisiting the stone artefacts from the site is the belief, which forms the crux of the thesis, that they can be treated as material proxies for human personhood. The analysis of the lithic assemblage provided in this section is based on two sources. Primarily it is conducted through the study of a sample of the retouched tools inventory as well as of the débitage and cores recovered from all three systematic excavations at the site[8]. Additionally,

[8] The Angela Mace collection is stored in its entirety in the British Museum (Department of Prehistory and Europe, Frank's House repository of Palaeolithic and Mesolithic collections. Repeated visits from January to

it is supplemented by the exhaustive and informative lithic analysis and refitting presented in the Hengistbury Head monograph (Barton 1992: chapter 4).

The Final Upper Palaeolithic collection contains 16,479 flint artefacts in total, of which 649 are retouched tools (Table 5.2). The examination of débitage by Nick Barton (1992) excludes the artefacts recovered by A. Mace (N=3060). From the resulting 13,419 items (of which 3,260 are chips and 4,078 are unclassified items), it deals only with complete blades and flakes (N=897). The analysis of cores, however, includes the material from all three excavations (N=88). Similarly, the discussion of the retouched assemblage includes all of the 649 tools.

As for the data-set comprised by the author for the needs of the present section, it contains information on débitage and tools from all three collections (as opposed to the Barton Monograph (1992) that excludes Mace's collection). Given the fact that the lithic assemblage from Hengistbury Head has been previously exhaustively analysed (see section 5.4.1, Mace 1959 and especially Barton 1992), in my own examination I tried to record the biggest sample possible in the available time. In order to achieve that, I looked at the totality of the artefacts stored at the museums in London and Bournemouth (see footnote 8). I subsequently proceded in recording c. 40% of the formal tools. In terms of the débitage (N=8,492 excluding chips and unclassified items), I recorded c.5% of all the flint implements recovered from the three excavations. Of this percentage, cores are represented by c. 61%, while complete items correspond to c.10% and spalls to c. 35%. Furthermore, I included a sample (c. 3%) of the fragmentary population (blades and flakes) that have gone largely unnoticed (apart from intentional breakage, see below) by the previous analyses.

The blades and flakes have both a complete and a fragmentary component. In lithic analysis, it is customary only for complete pieces of débitage to be considered so that the totality of information can be assessed. Here I am altering this practice. Although I agree that intact artefacts preserve in the best possible way useful indications about the technology that produced them, I am not willing to exclude their fragmentary counterparts because I think the partial information they include is still contributing to the understanding of the assemblage.

July 2006). The Campbell collection from the 1960s along with the 1981-84 collection from the Barton excavation are kept in Bournemouth (Russell-Cotes Art Gallery and Museum. Visited in August 2006).

Of course caution has to be exercised in recording and in statistically handling this partial information. For this reason, incomplete pieces are clearly marked as such, with the missing parts noted and the surviving ones described in terms of both quantitative and qualitative attributes. For this analysis, I initially intend to extract information on the morpho-metric characteristic of the lithics from the complete items. To this effect, broken pieces can act in a complementary way. A surviving proximal end of a blade can add insight to the way platforms were shaped and prepared irrespective of whether the medial and/or the distal part is missing. Similarly, the broken material can be constructively discussed with regard to the retouched tools. A semi-abruptly backed blade fragment is still a backed tool even though the actual measurements of the blank cannot be taken, and even though the absent part may have included information that would turn the backed blade into another tool. But this should be of no concern here, as what we analyse and interpret is what we get from the archaeological record. It is the tangible shapes and forms that lead us to more abstract inferences, extendable even to missing parts. Finally, a decision not to include incomplete pieces of débitage (and retouched ones in the next section) would make even less sense when dealing with an assemblage of such a fragmented nature (see fig.5.5: the total of fragmented blades, flakes and blanks that cannot be recognised as either is 44.3 %) as the one at Hengistbury Head.

Regarding the availability of artefacts for individual analysis (e.g. measurements), it should be noted that a total of about 385 items (mainly complete and broken flakes and blades, with a few of them being retouched, core tablets and other technical items) is not accessible because it forms part of refitted sequences: 25 cores and 4 sets of refits where the core is missing (Barton 1992: 160). Table 5.3 summarises the amount and the type of flint artefacts that form part of the original Hengistbury Head analysis and the one carried out here.

Artefact Types	HH monograph (Barton 1992)	Thesis
Flakes & Blades	(only complete; excl. Mace) 897	(complete & fragm;3 collections) 215
Cores	(all 3 collections) 88	(all 3 collections) 54
Core Fragments		9
Burin Spalls	100	45
Various		7
Intentional Breaks	176	Intentionally snapped blanks, unclear whether they are flakes or blades 49
Total Débitage	**1261**	**379**
Retouched Tools	**649**	**258**
N	**1910**	**637**

Table 5.3: Summary of the data sample collected for this thesis juxtaposed to the relevant data in Barton 1992.

The composition of the catalogued and analysed sample is as shown in Fig. 5.4. Even at first inspection of the assemblage, a substantial fragmentation of the lithics is apparent. The non-complete blades and flakes, along with the fragmented blanks that cannot be recognised as neither blades nor flakes before their (intentional breakage), form an impressive 44.3% of the assemblage. The reasons for the fragmented state of the assemblage can be broadly attributed to one of the following categories: knapping accidents, occurring either during the primary manufacture of the artefacts or during their secondary retouch; taphonomic processes like trampling; and intentional fragmentation. Of the fragmented pieces, those that were intentionally broken have been thoroughly analysed and detailed definitions and descriptions of features indicative of intentional breakage have been put forward elsewhere (Bergman et al. 1987). In the present data set these instances of intentional breakage, where this is possible to document, form a further sub-set of the two (blades and flakes) fragmented categories and will be dealt with separately (section 5.5.1.4). Figure 5.5 presents an additional artefact class: it consists of the blanks that carry the diagnostic features of deliberate fragmentation but cannot be described as an original flake or a blade. Due to the fragmentary state of the material, the differentiation between flakes and blades could not be exclusively done on the basis of the morpho-metrical definition of a

blade being twice as long as a flake. Therefore the technological trait of the blade's dorsal surface having negative scars parallel to the flaking axis was taken into account. In general however, the preferred length to width ratio in the assemblage is locked at around 2.5:1 in all examined blades, retouched and unretouched.

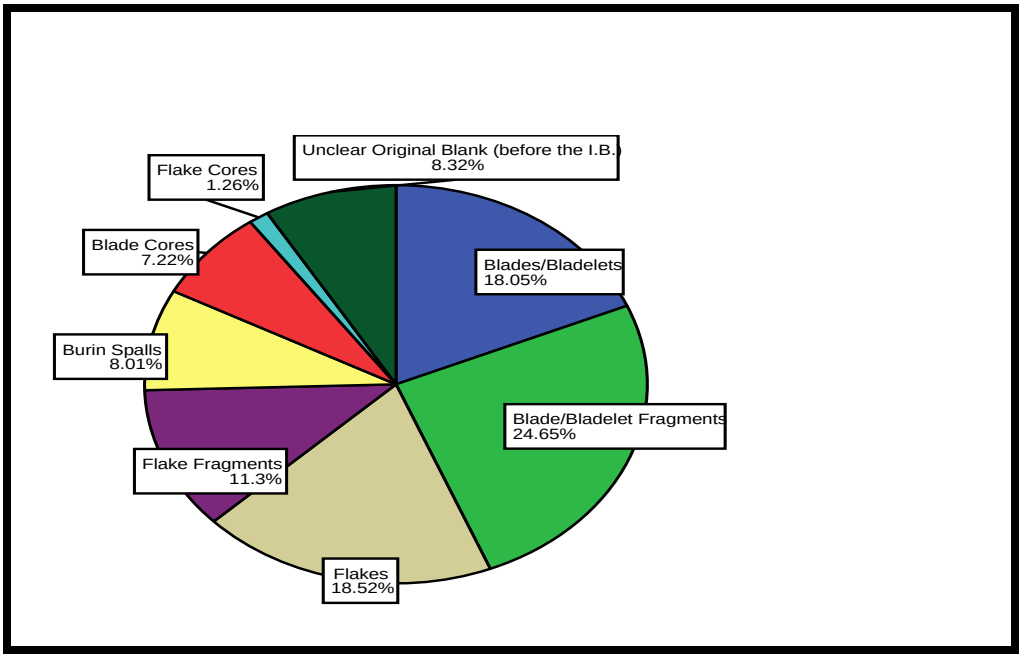


Figure 5.5: Composition of the major classes of the analysed artefacts in this study (N=637). I.B. = intentional break

At the site, the raw material used exclusively is two types of flint of indistinguishable quality in terms of flaking properties. The locally derived flint comes in smaller cobles with easily shattering surface, whereas the regionally transferred flint from what is today known as the Isle of White is bigger in size and has a well developed cortex. The flint colour, where possible to classify, varies from black, to grey, to dark brown, to light yellowish brown, with an obvious predominance of the grey coloured material (Fig. 5.6). This most common occurrence could be attributed to a conscious colour preference within a specific aesthetic, symbolic and conceptual system, which might have played a role in the construction of personal and social identities (Jones 2002a).

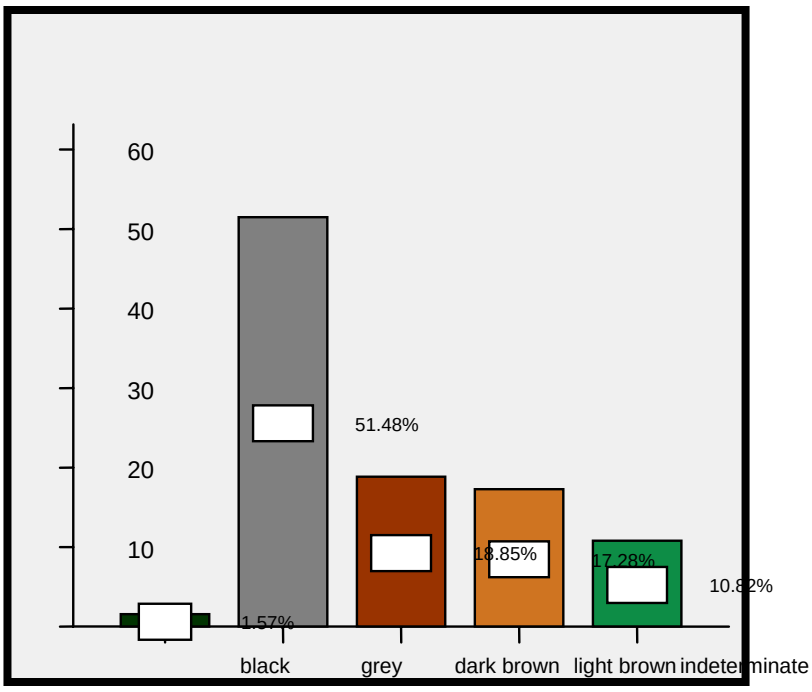


Figure 5.6: Flint colour variation (N= 637)

The condition of the entire lithic assemblage shows some variation and it can be summarised in three broad categories. As expected, the majority of the artefacts bear at least certain degree of rolling and patination, which is in general of a grey-beige colour. The amount of burnt and heavily burnt items form the second most common category, whereas the number of pieces in fresh condition are slightly less frequent (for a more detailed picture of the assemblage condition see Fig. 5.7).

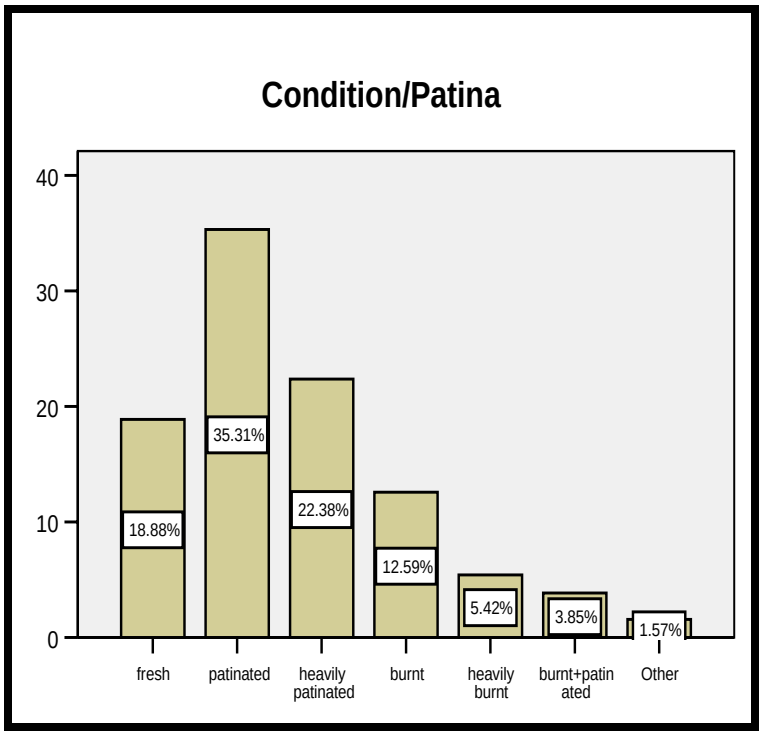


Figure 5.7: Variation in the condition of the lithic assemblage (N=637)

Cortex, in amounts ranging from just a few traces to wholly cortical, can be found in almost 45% of the assemblage (Fig. 5.8). This is a clear indication that much of the knapping was taking place on the site. The small percentage of wholly cortical items suggests that only the very first stages of the reduction sequence were somehow rare and limited. This picture is in accordance with the fact that the nearest source of raw material was located in less than 12 km (7.5 miles) from the site and therefore there was no apparent need for the flint to be reduced into more manageable nodules for transportation from the source to the site.

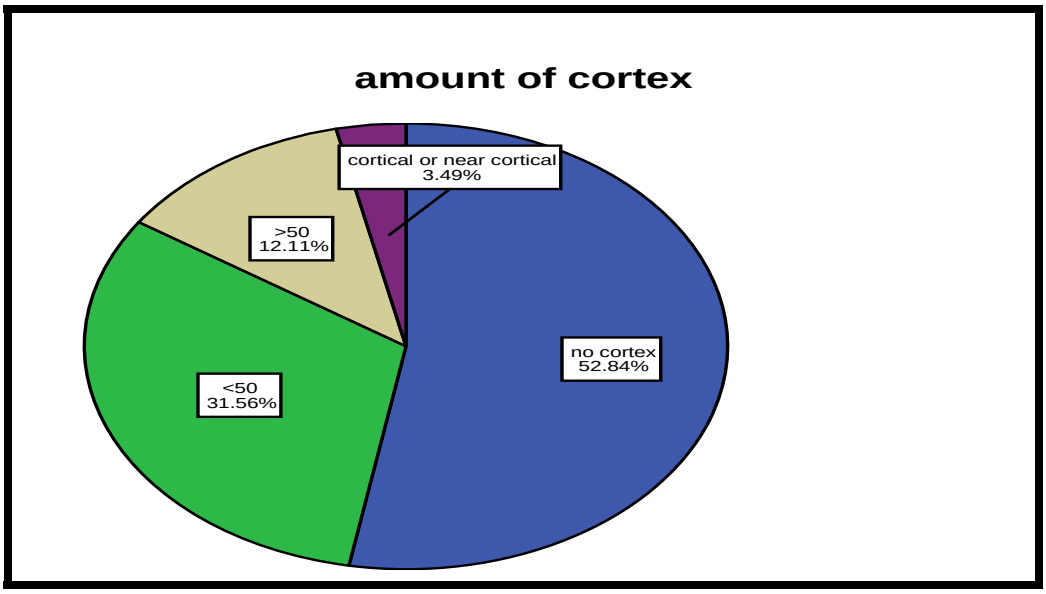


Figure 5.8: Cortex quantity in the assemblage (N=637)

One last comment regards the general identification of the lithic production in HH as preponderantly laminar. The blades and bladelets in the assemblage, complete and fragmentary, clearly outnumber the flakes as do the blade cores (see Fig. 5.5). Furthermore, blades bear much less cortex when compared to flakes (Fig. 5.9).

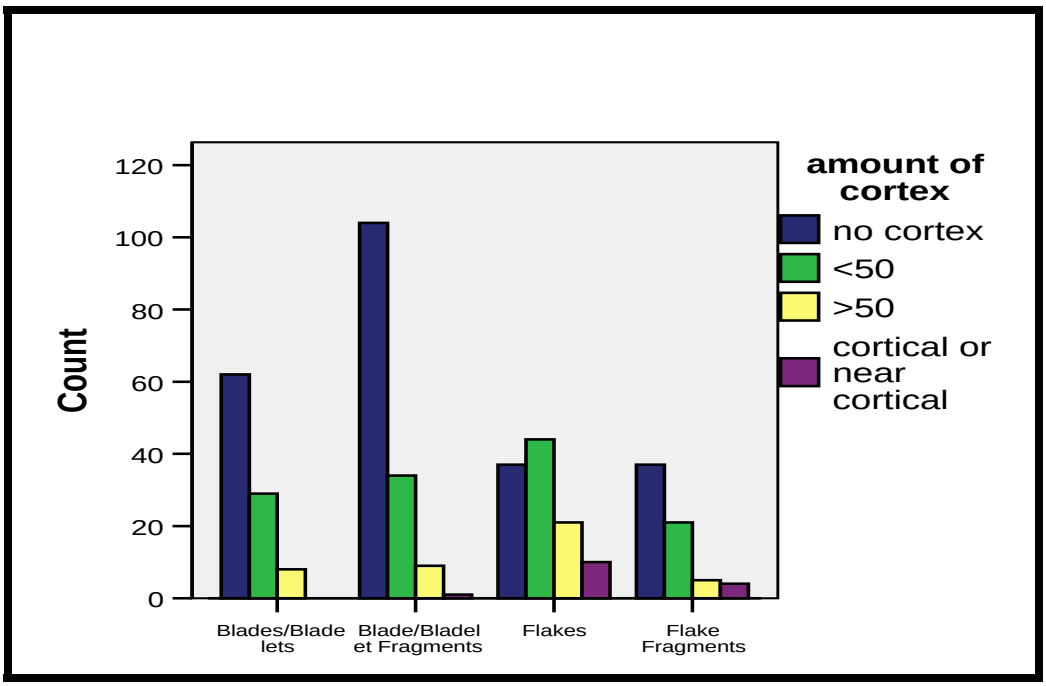


Figure 5.9: Number of complete and fragmentary blades and flakes exhibiting cortex (N=637)

This observation agrees well with the way blade production works: the majority of cortex is removed in the initial stages of core preparation, where flakes are struck off in order for the blade débitage to begin. Finally, when the complete blades and bladelets are plotted on a scatter diagram with length and width as the axes, the emerging picture is that of slender blades: the obvious pattern is of long and narrow pieces (Fig. 5.10). This could be interpreted as another intentional aesthetic/ symbolic choice.

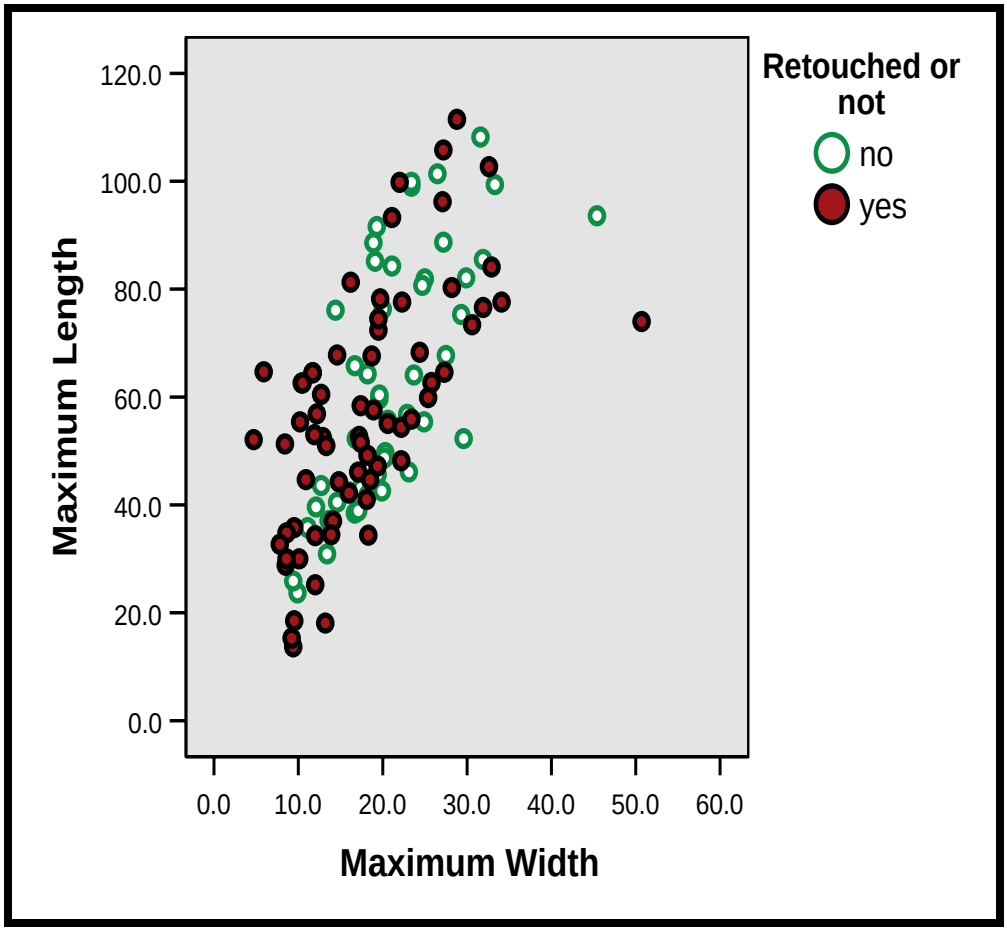


Figure 5.10: Length and width (in mm) ratio for complete, retouched and unretouched, blades & bladelets

In the next two sections I will discuss the primary (débitage and cores) and the secondary (retouched tools) technology respectively.

5.5.1 Débitage and cores

The analysis of the unretouched component (cores, complete and incomplete flakes, blades and bladelets, technical pieces (for selected examples see Fig. 5.11)) is included in order to serve as an indicator of the overall technological choices encountered in the assemblage, which in turn include information on the realisation of social personal identity.

These unretouched artefacts represent almost 60% of the current data set. Their detailed attribution to categories is given below.

Unretouched Artefact Types	Count	Percentage
Blades/Bladelets	48	12.7
Blade/Bladelet Fragments	66	17.4
Flakes	68	17.9
Flake Fragments	33	8.7
Burin Spalls	45	11.9
Blade Cores	46	12.1
Flake Cores	8	2.1
Core Fragments	9	2.4
Various	7	1.8
Intentional Break on uncertain blank (flake or blade?)	49	12.9
Total	**379**	**100.0**

Table 5.4: Detailed list of débitage and cores (N=379).

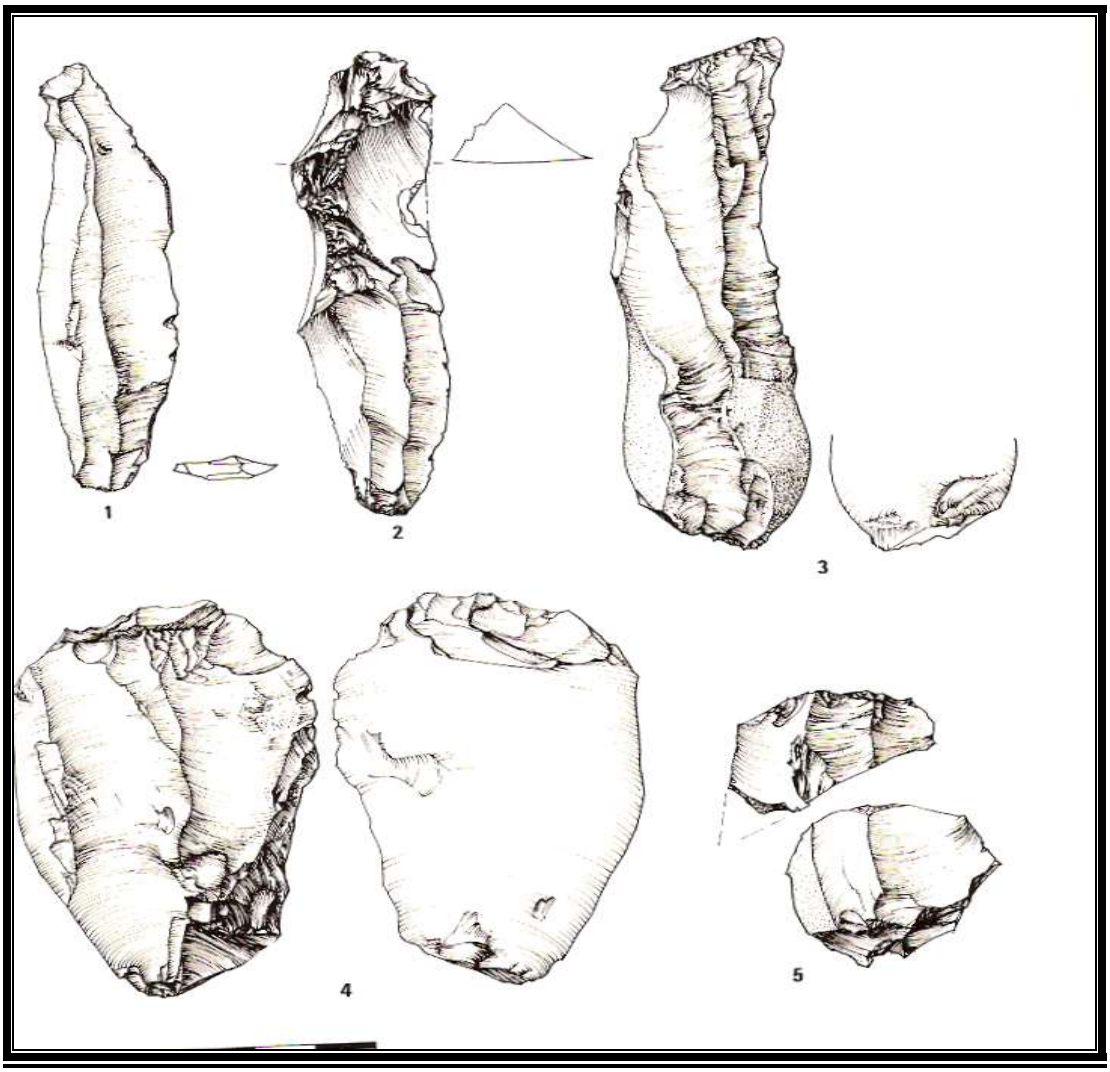


Figure 5.11: Examples of débitage (scale 1:1). 1-3: blades; 4: flake core (on a flake); 5: core tablet (Barton 1992: 97)

5.5.1.1 Cores

In total sixty three cores from Hengistbury Head are recorded here. Typologically, they are separated into blade (46) and flake (8) cores. Furthermore, the analysis also includes nine core fragments (Fig. 5.12). The majority of the cores display at least some remnants of cortical surfaces (Fig 5.13). This suggests that even the earliest stages of core preforming took place in situ.

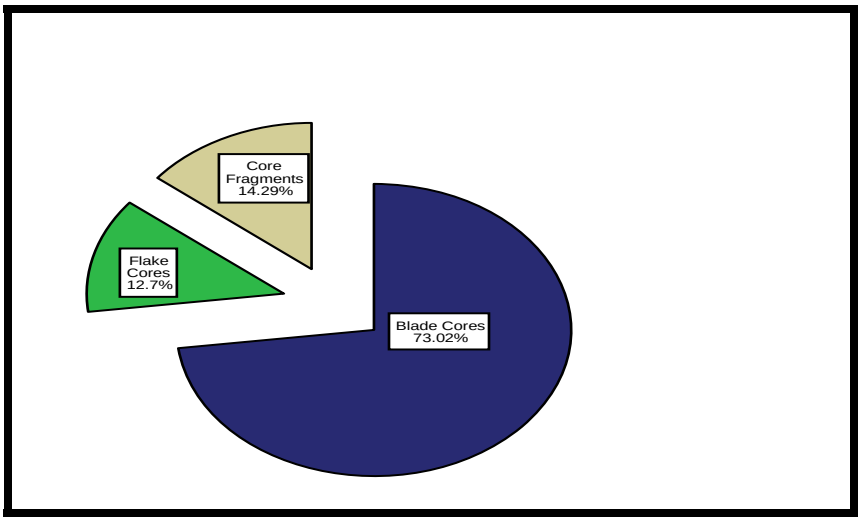


Figure 5.12: Core Types (N=63)

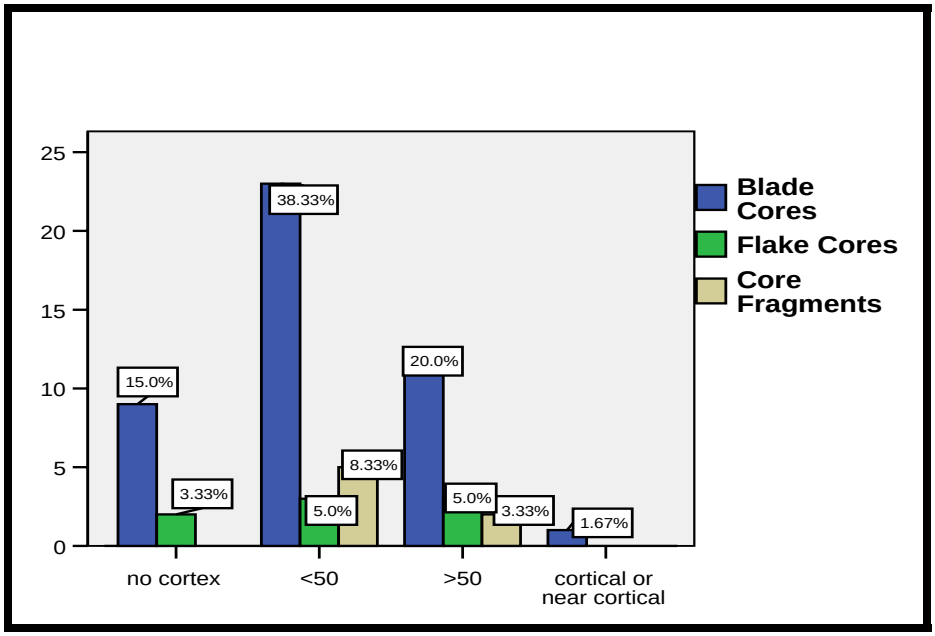


Figure 5.13: Amount of cortex on cores (N=63)

Blade Cores

The majority of cores in the assemblage are blade cores (N = 46). Depending on the type of platforms, all three categories are represented. The most common occurrences are blade cores with two opposing striking platforms (Table 5.5). This however is not in direct analogy with the dominant dorsal scar patterns for the blades and bladelets. This contrast can be explained in terms of the flaking mode: though two platforms may appear on the core, it is

mainly one that acts as the principle platform for the blade removals. The other one is playing a subsidiary role for correcting knapping accidents and for maintaining the shape of the flaking face.

Types of Blade Cores	N
single platform	9
dual platform, opposed	31
dual platform, crossed	5
multiplatform	1
Total	**46**

Table 5.5: Blade Cores types

Almost 58% of the blade cores have one flaking face. Therefore it seems that even in the most common cases where a core is flipped 180 degrees in order for a second platform to be used, the preferred surface for the removals of blades remains the same. Two active faces on cores are represented by 40% and can be the result of both single and dual platform knapping (Fig. 5.14).

As it is expected, all cores vary in size and are made on nodules. The only exception is core fragment L2[9], from an originally bipolar blade core, which is made on a frost-fractured flake. It is only ten blade cores that are completely devoid of their natural exterior. The rest exhibit at least some amount of cortex.

The majority of the cores show some kind of preparation of the striking platform. The trimming of the edges is obvious in two examples. Faceting is present in 22 instances. This control of the dorsal edge of the platform is an indicator of the desire for consistent blade removals (Fisher 2006: 229). Cresting appears 13 times and it usually but not exclusively happens at the back of the core. From the clear examples of cresting, 7 are bidirectional, 3 unidirectional and another three are impossible to assign to one of the above two types of cresting.

[9] British Museum, box 2D27/15

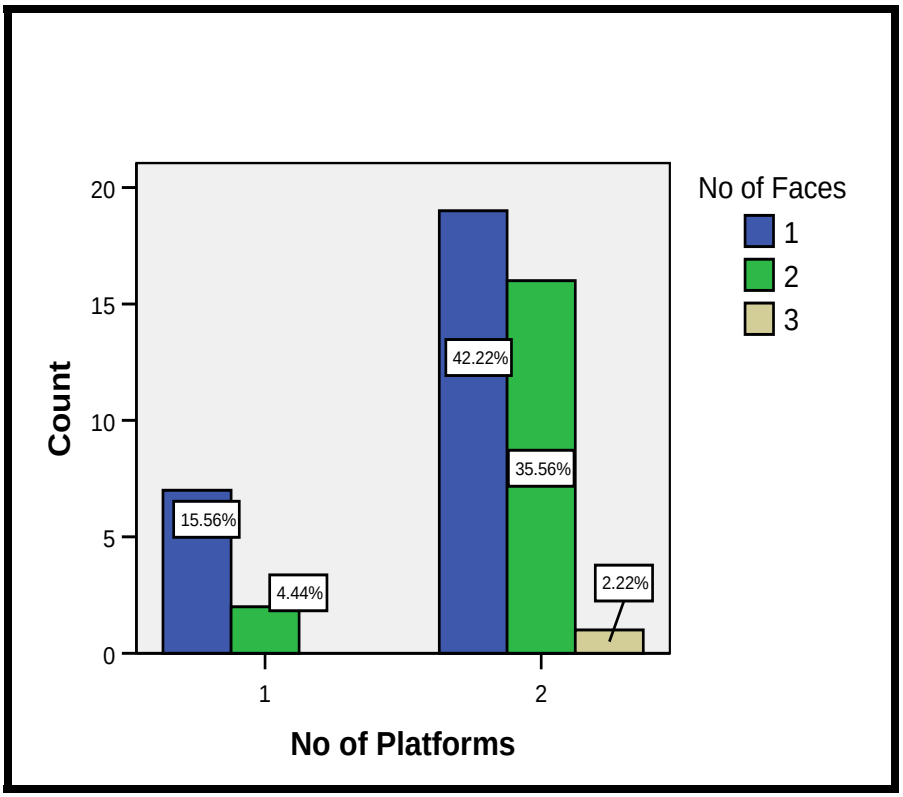


Figure 5.14: Preference for blade cores (N = 46) with one active flaking face, irrespective of the number of striking platforms

In many blade cores there are obvious examples of hinges, which could be attributed either to inherent faults of the raw materials or to deficit in knapping skills. In any case, they would render the further working of the cores difficult if not impossible, unless a corrective action was opted for. Such effort to rectify problems is the technique of faceting, which apart from preparing the surface to receive the blow it is also used in order to rejuvenate platforms of problematic angles. The removal of a single flake (or core tablet) which takes off the unworkable platform is another technique. Such examples are superbly manifested in blade core refits (like core A, see Barton 1992: 139) whose reconstruction includes five core tablets. Finally the rejuvenation of a flaking face is also achieved by the dispatch of a large flake. There are two such examples of "flanc de nucleus".

In general, the technique of blade core preparation and knapping at HH can be broadly traced as follows. The initial flint nodule was shaped by the removal of both its ends so that the longer sides could be used. The first blade removals were often, but not always, guided by uni- or bidirectional cresting. Cores with two, almost always, opposed platforms

were preferred, with one of them acting as the principal striking platform. Quite often both platforms would remove blades from one core surface (face). In order to avoid accidents the technique of faceting was employed. Faceting was also adopted as a corrective strategy along with core tablets detachments. Both techniques, which are not mutually exclusive, were aiming at rejuvenating the striking platforms.

As a final comment, it is worth noting that three of the cores (c24, a9 and L23) show semi-abrupt retouch that suggests they had been used as scrapers and one core (core x) exhibits a burin facet on unprepared surface[10]. Despite their possible utilisation as core tools these items are only presented here and are not included in the relevant tool categories mainly because there is no certain way to distinguish their retouch from edge trimming for platform preparation (Roger Jacobi pers. comm.).

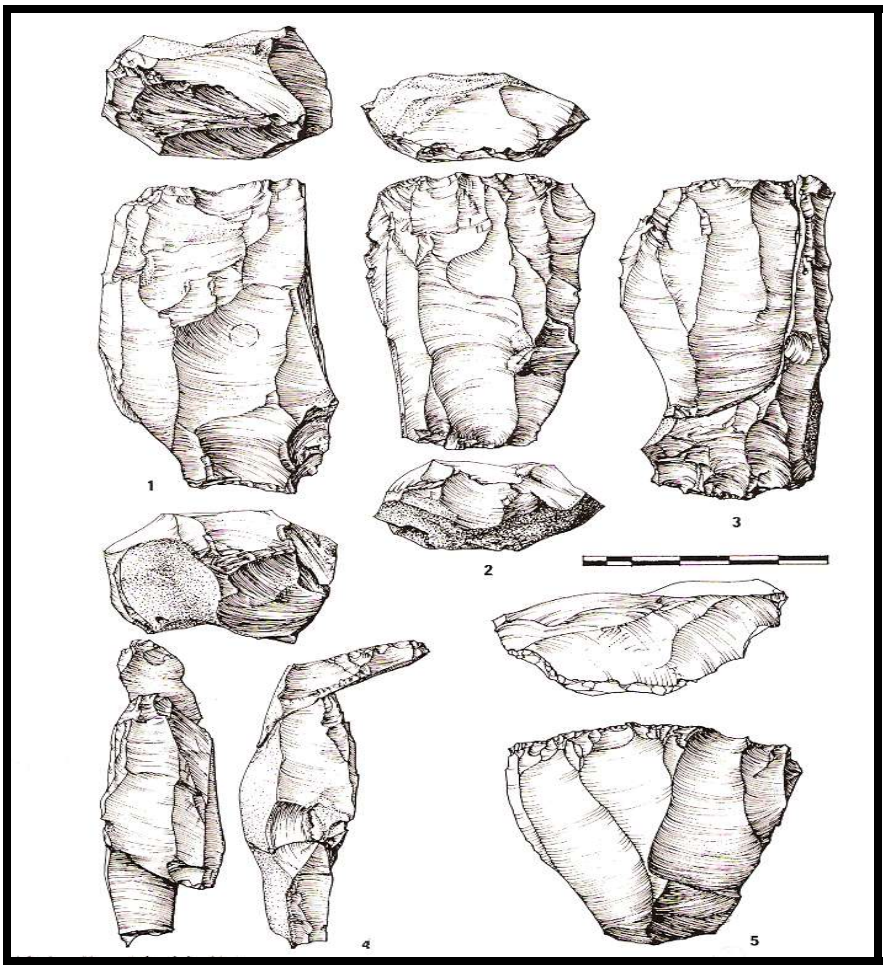


Figure 5.15: Blade cores. 1-4: opposed platforms; 5: single platform pyramidal core (Barton 1992: 104)

[10] All from the Mace collection at the British Museum, Franks House, in box 2D27/13.

Flake Cores

Eight flake cores are described and analysed in this section, a 32% of the excavated assemblage. Five of them have one platform. Another two are multiplatform types displaying multidirectional removals used to produce a single or any number of simple flakes. Finally, there is a single bipolar core with two opposed platforms. They are all rather small, with the mean of their maximum dimensions (length x width x thickness) being 57.2 x 46.3 x 32.3 mm. Almost all of them exhibit some amount of cortical surface. There is no evidence of platform preparation, which contrasts markedly with the production of blade cores.

The refitting pieces of Core K[11] include an endscraper whose cortical edge was removed by semi-abrupt retouch (Barton 1992: plate 4.44).

Of interest is a unique example of a flake core on a flake, which forms part of the refitted group of Core J[12]. After its removal, the flake was ventrally truncated at the distal end so that a platform for subsequent small removals could be produced (Barton 1992: plate 4.43).

5.5.1.2 Burin spalls

Fifty one burin spalls were recorded in total, with six of them showing signs of retouch. Their dimensions vary considerably, with maximum length ranging from 7.1 to 93.2 mm (mean = 27), and maximum width spanning between 2.2 and 25.7 mm (mean = 8). One spall is plunging and three are totally cortical.

5.5.1.3 Blades and bladelets, complete and fragmentary

The reasons for selecting both complete and incomplete blades and flakes have been given in section 5.5. In the present data set, there are 48 complete unretouched blades and bladelets and 66 unretouched blade fragments. Complete blades have mean length dimensions of 63 mm, width 21 mm and thickness 7.4. Maximum thickness measurements

[11] Russell-Cotes Museum, Bournemouth, box TIN: 675
[12] Russell-Cotes Museum, Bournemouth, box TIN: 663

have also been taken for each of the three sections (proximal, medial, distal) and in mean terms, the medial part appears thicker (6.7 as opposed to 5.5 for proximal and 5.9 for distal).

As has been discussed above (see Fig. 5.9), in the not very frequent case that blades exhibit some cortex, this covers less than half of the artefact's surface and there are only 8 instances that are wholly cortical.

Complete blades and fragments retaining their proximal part show a clear preponderance of plain platforms (Table 5.6), measuring 7.8 in mean length and 3.2 in mean width. Similarly, straight profiles dominate the complete blade population and this is also attested by the fragmented pieces which were big enough to be recorded for such an attribute (Table 5.7).

Platform	N	%
plain	40	59.7
dihedral	2	2.9
facetted	9	13.4
punctiform	14	20.9
rubbed	2	2.9
Total	67	100

Table 5.6: Platform types in the blade débitage

Profile	N	%
straight	27	23.7
slightly curved	19	16.7
curved	20	17.5
Unidentifiable	9	7.9
Total	75	65.8

Table 5.7: Blade profiles

The scars on the dorsal surface of the blades are mainly unidirectional and almost exclusively they originate from the proximal end (Fig. 5.16). Furthermore, there are 29 instances of damage recorded along the edge of the artefacts and 8 examples of cresting.

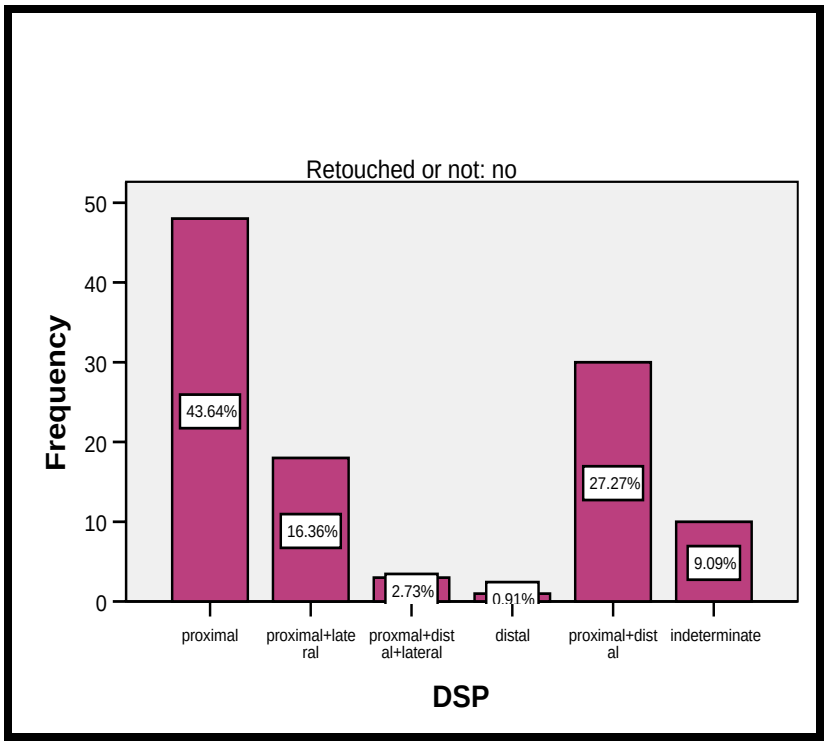


Figure 5.16: Dorsal Scar Pattern (N=114)

Where possible, fragmented blades have been recorded for the part of the artefact that survived the break (Table 5.8). The medial part, being the result of a double break of the piece which would remove both the areas of the tip and the butt, is the most common occurrence (n = 11). If we add the instances where the break/ snap is single and therefore either the upper or the lower ends are missing, the medial part is present a total of 36 times (~53%). This is in accordance with the fact that the medial part is usually the thickest (see previous page).

Surviving part	N	%
proximal	7	10.6
medial	11	16.2
distal	1	1.4
proximal + medial	18	27.2
medial + distal	7	10.6
indeterminate	22	34.0
Total	66	100

Table 5.8: Surviving parts of the incomplete blades (N=66)

5.5.1.4 Intentional Breaks

Of the 157 fragmented blades, 19 are recognised as intentionally broken according to the attributes set out. These can be produced from the percussive blow that caused the break (contact features) and can be detected either on the surface (dorsal ridge crushing and incipient cones) or on the break itself (points and cones of percussion). Alternatively the intentional snaps can be the result of flexion, like conchoidal fracture marks, lips and wedge-shaped fracture lines. The latter are however non-diagnostic as they can also appear on accidental breaks (Barton 1992: 130-132; Bergman et al. 1987). Only two of them are retouched. It is interesting that none is burnt, their condition ranges from fresh (N = 6) to heavily patinated (N = 1) with the majority being patinated (N = 12). Picture 5.1 shows the complete refit of an unretouched blade from three intentional segments. The original blank was snapped twice along the horizontal axis.

Picture 5.1 Complete blade refit from three intentionally broken fragments.

There are another 53 instances deemed intentional breaks but their small size and the absence of definite morphological features make it impossible to assign them to an

original blank. It is true that in the present data base the absolute majority of the breaks appear on blades. This can be attributed to the fact that blades are in general thinner and thus more susceptible to snapping when retouched and/ or re-sharpened. However, since there are three examples of intentional breaks on flakes, I thought it best to record the 53 cases as unclear with regard to the initial artefact type prior to the break. Of the 53, only four are retouched. The rest are small segments with one or two snaps. Their small size makes it easier to group them into three categories for the existing part (proximal, medial, distal; see Fig. 5.17) as opposed to the five categories put forward in Table 5.8. Once again, the medial pieces outnumber the rest (29 instances against 13 proximal and 7 distal counts).

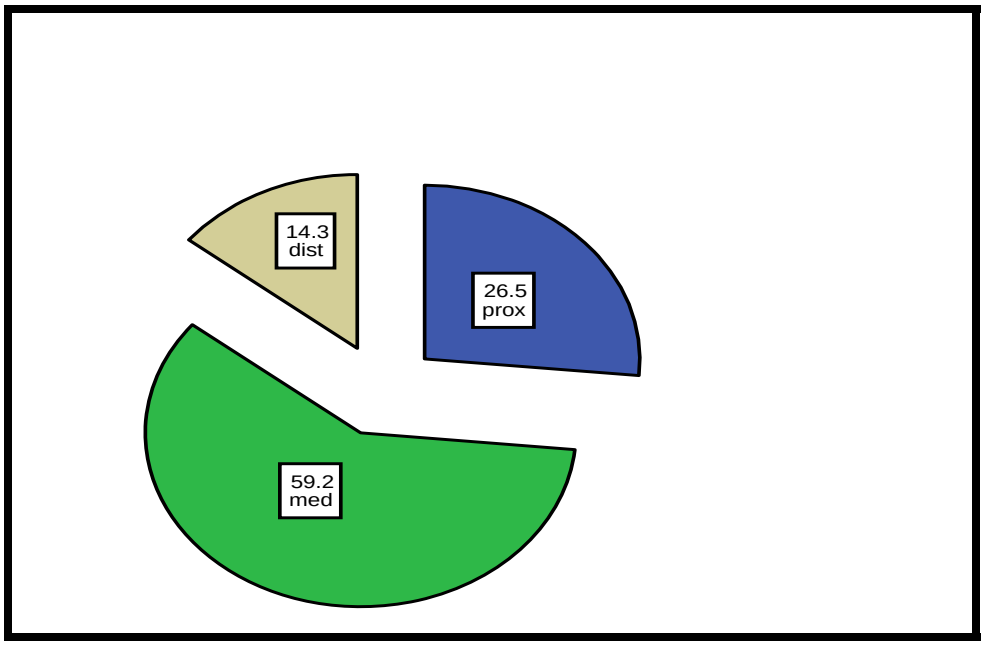


Figure 5.17: Surviving parts of the (unretouched) intentional breaks on uncertain blanks (N=49)

Intentional breaks hold a place between primary blank production and secondary tool manufacture as they lack modifying retouch. In terms of spatial distribution, they are concentrated towards the western half of the site (Barton 1992: 132).

5.5.1.5 Flakes and flake fragments

The population of complete flakes comprises 118 items with the unretouched component representing 68 of them. This débitage has mean dimensions of 38 x 30.2 x

8.5. Measuring the thickness for each section of the artefact reveals the medial part to be the thickest (mean 8), though only marginally more so than the distal (mean 7.6). As with the blade category, the platforms are mostly plain but this time they are considerably bigger (14.4 x 5.2). Once again the most typical dorsal scar pattern is the unidirectional.

The total of 72 non-complete flakes can be broken down to 33 unretouched pieces and 39 formal tools. Only three instances of intentional breaking have been recognized. The recorded surviving parts reveal the distal as more resilient (N=18), although this picture slightly changes if all the instances where the medial part is present (N=4), along with either the proximal (N=6) or the distal (N=12), are added up. The common occurrence of the distal part is probably due to its thickness, which is more than 1.5 mm thicker than its laminar counterpart. Another obvious difference with the blade débitage is the larger amount of cortex present. Twenty one percent of the flake element is covered by cortex in more than half its surface, and 7.4% of this is totally cortical (see also Fig.5.9).

5.5.1.6. Crested pieces

The crested pieces in the data set are 33 and 6 of them are retouched (two are end-scrapers, two are burins and another two were not classified). The next two tables indicate that cresting is primarily associated with blade production (preparing the core for the removal of blades, table 5.9) and that it is mostly unidirectional (Table 5.10).

Artefact Types	Cresting
	Yes
Blades/Bladelets	7
Blade/Bladelet Fragments	4
Flakes	4
Burin Spalls	3
Blade Cores	13
Core Fragments	1
Various	1
Total	33

Table 5.9: Artefact types exhibiting cresting

Cresting Type	N
Unidirectional	18
Bidirectional	11
Indeterminate	4
Total	33

Table 5.10: Types of cresting

5.5.1.7 Summary of the débitage and cores

The primary technology in HH is represented by blades, flakes and their respective cores all worked on local and regional flint of equal quality. The preponderance of blade cores and blades in the assemblage along with technological indicators such as platform preparation, cresting, and much less cortex in blades than in flakes point to the fact that all stages of blade production occurred in the site. An important feature is the intentional fragmentation of blanks (blades). I believe that the percentage of the wilfully snapped artefacts would be much larger than it is now if in too many instances it was not impossible to distinguish at all deliberate breaks from accidental ones.

5.5.2 Retouched artefacts

In this section I will deal with the analysis of the 258 recorded retouched items. They represent 40% of the total tool population (N=646) recovered from all three excavation periods. The Upper Palaeolithic typology used here is based on the one provided by de Sonneville-Bordes and Perrot 1954-56; Demars and Laurent 1989.

An overview of the tool types is presented in Table 5.11. The three tool categories I intend to place more emphasis on are highlighted.

Tool Types	N	%
Backed	**64**	**25**
End-scrapers	**67**	**26**
Burins	**54**	**21**
Truncations	10	4
Shouldered Points	6	2
Tanged Points	5	2
Composite Tools	6	2
Awl	1	0
Denticulates	8	3
Microburin	1	0
Notch	3	2
Retouched Burin Spalls	4	2
Saw??	1	0
unclassified	21	8
Piercer/Bec	7	3
Total	258	100

Table 5.11: Catalogue of retouched tools

Information regarding the retouch of the artefacts was coded in terms of its type, its extent and its position on the blank (Table 5.12). As a general rule, an effort was made to use inclusive rather than detailed categories in order to facilitate accurate descriptions. Thus the retouch type was summed in four major groups, with a fifth provisioning for the composite tools exhibiting more than one retouch type. Backing, though abrupt by definition, is documented separately. The decision has been based on its high incidence and its apparent significance in the assemblage.

Type of Retouch		Extent of Retouch	Position of Retouch
Backing	(25%)	Continuous	Proximal
Abrupt	(39%)	Discontinuous	Medial
Semi-abrupt	(13%)	Partial	Distal
Burination	(20%)	Other (any combination)	Left Lateral Edge
Multiple	(3%)		Right Lateral Edge
			Left & Right Edge
			Circumference
			Inverse
			Alternate
			Other (any combination)

Table 5.12: Categories of recorded information on Retouch

Given the nature of the lithic production in the site, it is of no surprise that it is the blade component, complete and segmented, that gets primarily chosen for retouch (61% as opposed to the 35% of retouch appearing on flakes and flake fragments). The retouched blanks confirm the general picture that arose from the débitage description: higher occurrence of plain butts, unilateral dorsal scars, survival of the thicker medial part in segmented blades and very similar percentages of surviving medial and distal parts in broken flakes. Putting burination (and for that matter multiple retouch) aside, the 77% of retouch in the assemblage is invasive and affects the breadth of the blanks. A comparison of mean maximum width in unretouched (~21mm) and in abruptly (including backing) and semi-abruptly retouched blades and fragments (~19mm) reveals that approximately 4mm were removed from the edge (Table 5.13).

Artefact	Value	N	Mean
Unretouched Blades	Max. Width	47	21.1
Retouched Blades	Max. Width	48	17.1
Unretouched Blade Fragments	Max. Width	61	20.1
Retouched Blade Fragments	Max. Width	58	16.6

Table 5.13 : Width in unretouched and semi- /abruptly retouched blades and fragments

The idea that there was a preferential blank selection for retouch in terms of metric characteristics was explored within the complete blade subset. Since by definition almost all the types of retouch (excluding burination) encountered at HH remove a significant part of the width, this measurement was not taken into consideration at this point. With regard to length and thickness of the blades, some differentiation is noticed, although it is not very significant in terms of absolute measurements. The unretouched blades are slightly longer and marginally thicker than the retouched ones (Table 5.14). When, however, this information is handled visually rather than descriptively the emerging picture is clearer. The scatter plot locates the majority of the blade tools in a "slim" category, where considerably long blanks are thinner (Fig 5.18).

	Unretouched Blades (complete)		Retouched Blades (complete)	
mean Length	63.1	(+)	57	
mean Thickness	7.4	(+)	6.4	
mean prox Thick	5.9	(+)	5.2	
mean med Thick	6.8	(+)	6	
mean dist Thick	5.5		6	(+)

Table 5.14: Length and thickness mean measurements for retouched and non-retouched blades

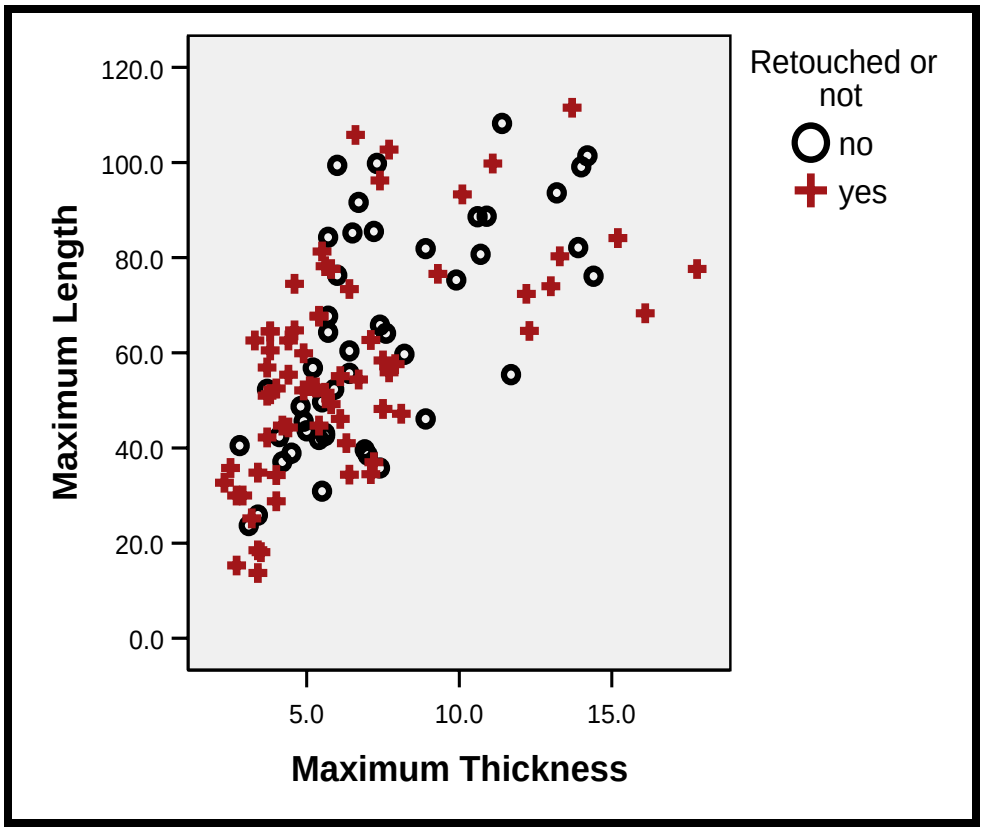


Figure 5.18: Length and thickness scatter plot for retouched and unretouched blades

5.5.2.1 Backed Blades

This is the most defining component of the assemblage (Fig. 5.19). The three excavation periods yielded a total of 324 mostly broken pieces. The present sample consists of 29 complete and 35 partial items (N=64, 20% of the total population).

Consistent with its inherent definition, backing is continuous in the greatest majority of the cases (N=54), and seems to appear more often on the right (N=32) than the left edge (N=21). In thirty six instances, the profile of the backed pieces is categorically straight whereas the concave examples are twenty and the convex cases mount to six.

Additionally, the backed blades exhibit the most invasive retouch. For every kind of retouch which reduced the original blank of the tool, two more measurements were

taken: the maximum lengths of the most invasive and of the second most invasive removal. The ratio of these lengths shows that backing is more invasive, even when it is compared to abrupt retouch which results in other tools (like end-scrapers, truncations, shouldered and tanged points).

Codes for Types of Retouch	Weighted Mean
Backing	1.4
Abrupt	1.2
Semi-abrupt	1.2

Table 5.15: Ratio of Length of most inasive retouch / Length of Second Most Invasive Retouch

According to Barton (1992: 124) the large number of burnt and broken backed blades (almost two thirds of the pieces), may be due to the accidental or intentional placement of the artefacts into a hot hearth. If this assumption is true, then it is possible that the burnt tools may be associated with activities around the hearth, like heating resin for the hafts. It should be noted however that there is not any conclusive evidence that backed pieces were hafted in Hengistbury. So far the only such hint comes from a blade with a clear colour boundary between its unburnt and burnt sections, which might be indicative of partial embedding in a haft. Whether hafted into a shaft or handheld, backed pieces were used as multipurpose tools, serving as knives or projectiles. Finally, in terms of horizontal distribution, the backed blades were concentrated in the western half of the site, and more specifically in its northernmost sector.

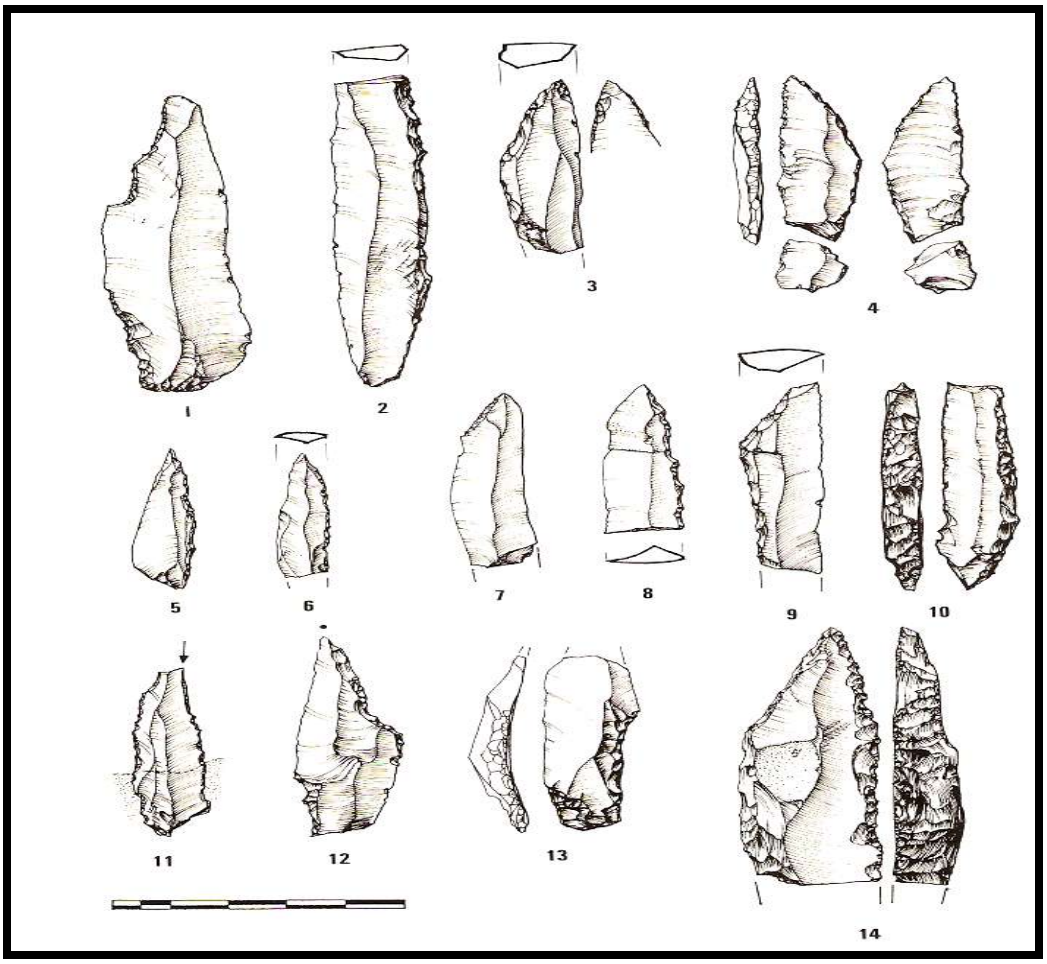


Figure 5.19: Selection of backed tools. 1: partially backed; 2 and 14: large backed tools; 3-4: curve-backed points (similar to Creswell points); 5 - 6 and 8: backed points; 7: (oblique) truncation; 9; Creswell point; 10: curve-backed blade with straight truncation; 11: backed tool; 12: backed tool with truncation; 13: shouldered blade (Barton 1992: 126)

5.5.2.2 Scrapers

This group consists of 67 tools (45.6% of the total; Fig. 5.20). Eighteen blades and blade fragments and another forty-nine complete and partial flakes have served as blanks for the end-scrapers. Almost half of the pieces (N=32) are broken and one third of them (N=23) are burnt. The majority of them retain some amount of cortex with 15 (~23%) having more than half their surface cortical. Signs of edge damage are visible in 5 instances. Also two examples of cresting, one unidirectional and one bidirectional, are present.

The type of retouch is most usually abrupt and continuous and unsurprisingly is located in the distal end of the artefacts. Nevertheless, apart from these simple end-scrapers, there are two instances of circular scrapers, with the retouch spreading in the whole circumference and four cases of the simple scraper being located in the proximal end. One more end-scraper[13] forms a multiple tool along with a single burin on truncation in its proximal part.

The majority of the scrapers are made on flakes, which means that these specific tools were preferably manufactured on more robust (shorter, wider, thicker) supporting blanks. At this juncture, there is one morphological point worth mentioning. As is evident from Table 5.16, the blades eventually turned into end-scrapers had a thicker distal part, when compared to flakes. This is at odds with what holds true for the débitage, where blades are slimmer not only in terms of maximal measurements (7.4 mm against 8.5 mm for flakes) but also in terms of distal thickness as well (5.9 mm as opposed to 7.6 mm). In other words, the preferential selection in HH was for flake scrapers on substantial blanks which provided wider but thinner scraping edges.

In general, the spatial distribution of end-scrapers does not exhibit any specific clustering. Rather, the tools are randomly scattered across the site.

ARTEFACT TYPE	VARIABLE	Mean	Std. Deviation
Blades	Maximum Length	59.3	16.1
	Maximum Width	24.7	10.2
	Max Thickness	**9.5**	3.8
	Thickness in Distal	**9.2**	3.9
	MaxWidth of Retouched Edge in End-scrapers	**21.4**	8.8
	Max Thickness of Retouched Edge in End-scrapers	**8.9**	3.9
Flakes	Maximum Length	40.4	8.8
	Maximum Width	31.6	6.9

[13] British Museum, box 2D27/4, item: t30

	Max Thickness	10.0	2.7
	Thickness in Distal	8.5	2.8
	Max Width of Retouched Edge in End-scrapers	26.8	7.1
	Max Thickness of Retouched Edge in End-scrapers	8.2	2.7

Table 5.16: Measurements of the retouched distal edges in end-scrapers made on complete blades and flakes

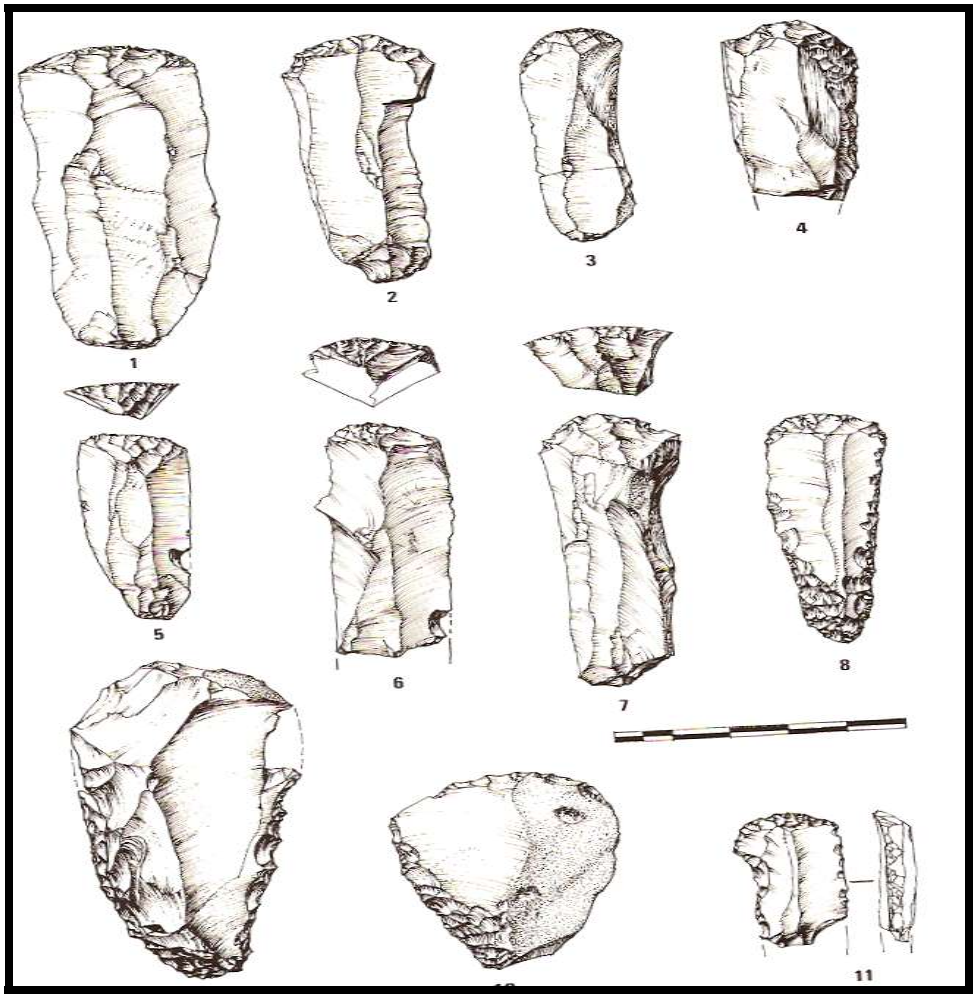


Figure 5.20: End-scrapers: 1-7: end-scrapers on blades; 8: end-scraper on a retouched blade; 9-10: end-scrapers on retouched flakes; 11: end-scraper on retouched blank (Barton 1992: 111).

5.5.2.3 Burins

A total of 54 burins is analysed here. In general, the typology of burins (Table 5.17) was devised on the basis of the platform/ surface from which the burin spall was detached. Therefore the term "dihedral" is reserved for the instances where the burin is made by two (or more) intersecting burin facets. It is a generic term and it comprises what elsewhere has been called dihedral symmetrical, asymmetrical (or déjeté) and angle.

The burins were made almost equally on either flakes (N=28) or blades (N=24). Sixty seven percent of the sample is broken and at least three instances were recorded as intentional breaks. Regarding the position of the burin blow, the distal end is preferred more often (30 instances), even though the proximal part gets selected ten times. Of interest are four cases of inverse and two of alternate burination. The majority of burins are single. Double burin facets appear twelve times, whereas multiple facets are rare (only 5 examples).

Type of Burin	N	%
on a break	16	29.6
on unprepared surface	17	31.5
dihedral	3	5.6
on oblique truncation	9	16.7
on concave truncation	4	7.4
on multiple truncations	1	1.9
on multiple breaks	2	3.7
on lateral retouch	1	1.9
multiple dihedral	1	1.9
Total	54	100.0

Table 5.17: Burin Typology

As with the end-scrapers, burins are scattered over much of the site surface without any obvious spatial clusterings. Refitting studies show that the distance between

burins and their spalls is usually rather short, suggesting that the tools were sharpened, used and discarded in more or less the same area (Barton 1992: 121).

5.5.2.4 Truncations

This group consists of 14 tools, all of which are made on blades. Six are broken, but none intentionally. Of the truncations, one is straight, three are oblique, two are oblique/ concave and four are concave. All are truncated at the distal part, and they bear no or very little cortex.

5.5.2.5 Shouldered Points

Of the six analysed tools made on blades, five are broken and four are burnt. The retouch is always abrupt and in four cases appears as discontinuous. There is no lateralization in the retouch distribution. It occurs either on the right or on the left edge, with one example of bilateral retouch. The shoulders are located in the proximal section of the tools. To date, no definite function is proposed for the tools, though it has been proposed that they can make effective projectile tips (Barton 1992, 127).

5.5.2.6.Tanged Points

The five partial tools are all made on blades and are abruptly and continuously retouched. The retouch occurs three times in the proximal part, once in the left lateral and once along both lateral edges. The tang is always formed in the proximal end. Unfortunately it was impossible to find and record one of the three more or less complete tools of the collection, therefore there is no information on the distal part usually forming a retouched point.

5.5.2.7. Summary of the retouched artefacts and assemblage interpretation

This section dealt with the presentation and analysis of six major types of the retouched tools. It showed that the homogeneous Final Upper Palaeolithic tool assemblage is dominated by a specific blade production with a technological

predominance of plain platforms and a morphological prevalence of straight backs. The majority of the tools are broken and burnt. Clear horizontal artefact distribution is generally absent. It is only the backed blades and the intentional breaks that manifest a noticeable clustering in the northern and western parts of the site. It has been proposed that this spatial organisation follows the pattern of various Late Magdalenian sites of the Paris Basin, where lithic scatters are related to hearths and activities taking place around them (Barton 1992: 196). Even though at HH there is no clear evidence for hearths, the NW concentration of tools can be associated with inferred hearthside activities of different nature. On the one hand, the mostly burnt condition of the backed blades could attest to activities involving the actual use of the fire or its hot embers (like in placing the hafted tools for preparing the natural adhesive). On the other hand, the overlapping concentration of unburnt intentional breaks could indicate the remains of knapping, like resharpening or preparing new blanks, which took place in close proximity to the hearth. Of course, the same area could be used for these activities in different moments in time but not too far apart.

Based on its strategic place, Hengistbury Head has been interpreted by its excavator as an ideal seasonal hunting camp. I feel that an additional point can be made about the nature of the site. As far as the lithic assemblage is concerned, the central purpose of producing blades occurs in all its stages, from blank preparation to tool resharpening. Since all the main successive steps of the chaîne opératoire are represented and the finished artefacts, along with evidence for on-site maintenance activities, are not missing from the site, it is plausible to interpret the collection as a complete assemblage of purpose specific tool manufacturing. This suggestion would be in accordance with the activities expected in a campsite, where hunting and meat processing is associated to the production, maintenance and repair of the relevant stone tool kit.

5.6 IMPLICATIONS FOR PERSONHOOD AT HENGISTBURY HEAD

It is the crux of this thesis that stone artefacts can be treated as material proxies for human personhood. The significance of this statement lies in the understanding of both the concepts involved as processes. First, the stone artefacts are not meant so much in the finished form that is recovered in the archaeological record. They are rather comprehended as the embodied and habitual process of making and using them, both in reality and metaphorically but always within social contexts. Equally, human personhood is not a stable quality. A key idea is that it is not even universal. Concepts such as hunter-gatherers, foragers and collectors may be useful working classifications but in an over generalising manner. They do not constitute types. Identity is instead fluid and partible, and it does not come in lumped categories like for example objects do. The implication of doing away with such "identity types" is that their inherent dualism can also be abandoned. Traditionally, hunter-gatherers are mobile people who either forage or collect depending on the site type they inhabit and on an elaborate logistical system (Binford 1980). But there is more to it. Hunting stands and base camps are peopled by persons who are enmeshed in relational meaningful communication with other people, animals, things, and natural phenomena. Leading a social life in a hybrid network helps construct two things: one's own state of being in the world and to a great extent one's world itself. In other words, identity is about constantly negotiating the core of one's existence. Being a person does not take the same form in all places and at all times. Identity has multiple facets and is created anew through actions (technology) and practices (social endeavours, networks) at places and times. Especially the latter were built not only in the traditional sense of forming bonds, alliances and co-operations but also in the sense of using the networks in order to define the self in one's own eyes as well as in the eyes of the others.

So far, the site of Hengistbury Head and its lithic assemblage have been discussed in terms of their descriptive characteristics. It is now time to turn to their interpretation. The framework selected for that aim is the social life at Hengistbury. The main theme in this discussion is that the techno-typological traits of the blade production are not mere material expressions of what is functionally needed in a hunting camp. I

argue that, additionally and above all, they are the external and therefore visible manifestations of the abstract inner workings of both individual and group identities.

When setting out the initial reasons for choosing Hengistbury as a testing ground for the exploration of the Lateglacial hunter-gatherers' reality (see section 5.3), I questioned the validity of the issues normally raised. Concerns about the position of the site in the chronological sequencing of the British Lateglacial and its affinities with continental Europe fit better with the culture-historical model and they may be less useful within the current framework of Upper Palaeolithic research. Studies for the circulation of raw materials attest to extensive exchange networks (Floss 1991; Fagnart 1997; Féblot-Augustins 1997) and a highly mobile way of life. Not only nodules of specific qualities travel a long way before they are worked down to tools in their final destination, but also finished artefacts made on exotic materials are imported in different sites. I will pick up this topic and expand it further in the next two chapters where I will be discussing the record of northwestern mainland Europe with reference to the case study of Rekem (chapter 6) and the network of sites in Middle Rhine (chapter 7). For the time being, the point I would like to stress is that the human groups who visited Hengistbury and left behind their material culture were not isolated, much in the same way as Britain was not an isolated island during the Lateglacial Interstadial. Rather, they were part of large interwoven webs of actual and metaphorical relations. It is these relationships, among people and between people and things, that are accountable for the functional and chronological variability. Long and slender blades with their backs straight rather than curved, in the absence rather than in the presence of bi-truncated backed pieces, along with shouldered and tanged points indicative of discrete archaeological entities in the mainland, and in conjunction with a great number of wide end-scrapers and burins, form the particular outcome of the negotiation of identity and personhood in the open-air site of Hengistbury at some point in the thirteenth millennium.

Gamble (2007: 140) introduces the complementary but often blurred concepts of sets and nets, with the former defining place and the latter referring to landscape. I will adopt these terms only for a moment, to rephrase what I mentioned before about Hengistbury Head and its connections. Under these definitions, the traditional "cultures"

or “stylistic territories” can be defined as static sets. But in a broader interwoven landscape, where movement and time are implicated, the sets of fixed archaeological entities are transformed into fluid nets and thus the local becomes regional.

At Hengistbury Head, the whole assemblage becomes a set of all the outcomes of a standardized blade production, or a set of sub-sets. Let us take a look at Fig 5.5 again. On the one hand, the slices of the pie representing the complete blades and flakes are two (sub)-sets, which I will term homogeneous. Each consists of very similar items, in terms of technology, shape, even of potential function. For example, the blades are mainly struck from a single face of opposed platform cores with prepared striking platforms and they are straight in cross section, with plain butts. It is also likely that the slimmer amongst them will get selected to be turned to retouched tools. On the other hand, the pie chart slices that stand for the blade and flake fragments are two heterogeneous sets. First of all, the artefacts in each category differ in that they can be intentionally segmented or not. Secondly, the attributes of every group are more difficult to integrate in a general picture. Although I have made the case that the most frequent part to survive the break is the medial for blades and the distal for flakes, quantitative and qualitative features lack uniformity. I should mention here that at any given point, there are also certain kinds of nets occurring at Hengistbury, not so much in the landscape-regional sense of the definition but in the non-static one. These are the limited bi-directional arrangements of people and things, of humans and stones, of knappers with hammers on the one hand and flint nodules on the other.

Moving away from Hengistbury Head and across the landscape, elements of the homogeneous or heterogeneous sets, including the knappers of the above example, are set to motion and are instantly transformed into nets. These nets allow us access to the relational nature of the Lateglacial reality, with Hengistbury Head forming part of the bigger European picture and with its variability being conceived of as material trappings of personal or group identity. As quick examples of the Hengistbury assemblage idiosyncrasy, I am using the preference for grey flint (Fig. 5.6), the preference for long and narrow blades with a somewhat stable length to width rate of 2.5:1 (Fig. 5.10) and the preference for wider but thinner in the distal part flakes especially selected for end-scrapers (Table 5.16). Such technological choices are defined as the artisan’s choices

amongst an array of available alternatives. Within Palaeolithic research, the notion of choice has been examined in terms of the production of specific tool types (Binford 1983), in terms of raw material acquisition (Féblot-Augustins 1997; Sternke and Costa 2006) and it has been invariably linked to the actions of individual knappers. However, the standardised choices at Hengistbury may be as much of a technological as of a symbolic, aesthetic nature and they may well reflect social strategies and negotiations made at a communal level. Choice and preference, beyond the technological and the functional, are one way to describe cosmological orientations and basic sociocultural organisation (Chapman and Gaydarska 2007).

The social self is not a coherent entity, but one that comprises fluid elements and conflicting tensions. Human personhood is structured in culture, is situated in context and is created in interaction. For these reasons, it is distributed in the world of people and objects and can be fragmented in time as well as across space. In this anti-cartesian hybrid world, objects are equally involved in the metaphorical negotiation, construction and performance of identities. They extend the mind, much as they extend the body (the worked flint and the stone hammer in a knapper's hands for example) and they mediate individual and networked personhood. Stones, bones bodies and senses are part of the world that the humans be-in, and instead of mere tools they are active components of the system, whose interactions brings forth the process of self-definition. The production of objects provides central metaphors for the construction of the self and the formation of social relationships (Brück 2006: 297).

I have mentioned elsewhere that an assessment of the social life of the past can be archaeologically attainable through the model of social practice proposed by John Chapman (2000). As all the relevant definitions and explanations have been produced in previous chapters, I will only mention here that this model has been recently revisited by the original author and it has been adopted with amendments and alterations (e.g. Gamble 2005; Knappett 2006).

At this juncture, I will reiterate the two interwoven layers of the social model: the social practices (of accumulation and enchainment) produce social relationships and identities. They are inseparable, in that although distinct they complement each other. The need for materialising these abstract notions and thus gaining access to the hunter-

gatherer ontology is accomplished through the social actions (of fragmentation and consumption), which are always contextual and meaning-producing (Table 5.18).

Social Practice *(metaphor for identity & construction of relations)*	***Accumulation*** ⟷ ***Enchainment*** *(gathering up of humans and objects)* *(exchange of humans and objects)*
Social Action **(material connection between humans and objects)**	**Fragmentation** ⟷ **Consumption** (breaking up and distributing) (using up and altering)

Table 5.18: Schematic representation of the social practices and actions with general definitions.

Before I move to the separate assessment of social layers in Hengistbury Head, I will mention briefly the social aspect of lithic production in order to make a link between social values and technological acts of producing. Against this background, the idea of the chaîne opératoire is useful for reasons beyond the obvious. Undoubtedly, the sequence of movements and technological actions primarily reside in the human body to produce forms and traditions of doing (see previous section on *habitus*). But more importantly, the chaîne acquires an added dimension, which is less technological and more social: "the term chaîne … as socialized action applied to matter" (Gamble 1999: 83). In other words, the chaîne is social because it always occurs in contexts of activity. The chaîne in stone tool production acts as a non-random, harmonious way of creating sets. It is a purposeful, active and bi-directional way of handling the physical properties of materials. As a result, the sets are more than an accumulation of their constituent items. They are themselves situated in social activity and, as such outcomes, they constitute the socially meaningful interaction of humans with minerals (Schlanger 2004).

Going back to the original question of the role of material culture in the construction of a relational Lateglacial human identity, let me first turn to the social actions involved, since it is these that embody the relations. The principle of fragmentation is defined as the simple and yet fundamental and universal action of intentionally breaking things in order to share, while each fragment may well stand for

the complete whole. The act of knapping is the fragmenting activity par excellence, as is the butchering of a carcass (Chapman 2000: 222).

In the context of Hengistbury Head, fragmentation is attested in the greater input than output when it comes to blank production. The large surplus of flakes and blades, compared to finished artefacts, indicates that the number of blanks regularly fabricated largely exceeds the number of tools actually needed or used. It is conceivable that at Hengistbury Head production happens at an excess of the amount of tools whose usefulness can be anticipated. Clearly flint knapping is fulfilling a role in the Lateglacial camp that is not strictly functional. It seems possible that the people who occupied Hengistbury were systematically making more than they could ever use. A possible relational answer to this paradox is that at Hengistbury Head, with the abundance of local and regional raw material, knapping was pursued not for functional or economic reasons but rather for reasons of self definition. The bodily actions of bashing one stone with another as well as the finished outcome of the process were a demonstration of who these people were and how they perceived their social reality. In short, making flint tools is essential to being a hunter-gatherer at Hengistbury Head. The technological process then may be seen as a typical example of "routinization": "routine is integral both to the continuity of the personality of the agent, as he or she moves along the path of daily activities, and to the institutions of society, which are such only through their continued reproduction" (Giddens 1984: 60-61).

Flint knapping has a relevance to social life. This relevance is not just economic and symbolical. These concepts somewhat detach people for their material culture. The relevance therefore is rather ontological. Flint and man cannot be separated and this seems fundamental to the construction of the personal and the collective self. Flint artefacts and the people at Hengistbury make each other. Flint knapping is crucial in their constitution as human beings.

Equally significantly, artefact manufacture is not only a hunting technology, but also a technology of the self. Technologies of the self "are those which permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom,

perfection, or immortality" (Foucault 1988). For Foucault, writing in classical times was an essential technology of the self among the elites, through which awareness of oneself (including one's body) was attained. The way of building the self among hunter-gatherers is, obviously, very different from that of literate societies. Therefore, the technologies employed must be equally different. My main argument here is that making things, and particularly flint blanks and retouched tools, plays among the Hengistbury Head hunter-gatherers a homologous role in relation to self-building to that of writing, reading or meditating in other cultural traditions.

The second proof for fragmentation comes from the intentional breakage of artefacts. As I have already presented the technical definitions of the feature, the character of the deliberately segmented part of the assemblage and its spatial distribution along with a traditional functional and a more agency-orientated explanation (section 5.5.1.4), I shall not expand here. I will just reserve a single comment. In a human-object hybrid world, a person-object ambivalence is taken for granted. It is easy therefore to accept that objects, like purposefully snapped blades, are inscribed by elements of the human self and personhood. This is a point I will return to shortly, when I will be discussing the process of enchainment.

The premise of consumption, constitutes the second social action engaged in the connection of people and objects. In the field of anthropology, two parallel definitions of the notion are offered. The destructive consumption is what the term suggests, the using and the complete using up of a resource. Archaeologically speaking, the exhausted cores in the site provide an adequate illustration. The other side of the coin, is the constructive consumption or the "creative appropriation of things" (Miller 2006). As Gosden put it "consumption does not mean the end of objects, but is part of their overall biographies, so that things may be consumed many different times in many different settings" (Gosden 1999: 163).

In a relational world, material culture is enmeshed in action and social relations and is rendered a participant in the discussion over the relationship between people and things. In a context where objects interact with and shape people, they also have agency (Gell 1998). A less assertive stance regarding objects' agency is taken by Knappett, when he argues for a symmetrical as opposed to Latour's equivalent agency between

mind and matter (Knappet 2006: 243). In any case, as active agents objects and things have life spans and biographical histories (Hoskins 1998; Gosden and Marshall 1999). In lithic technology, this cannot be better exemplified than in the activity of retooling (Fig. 5.21).

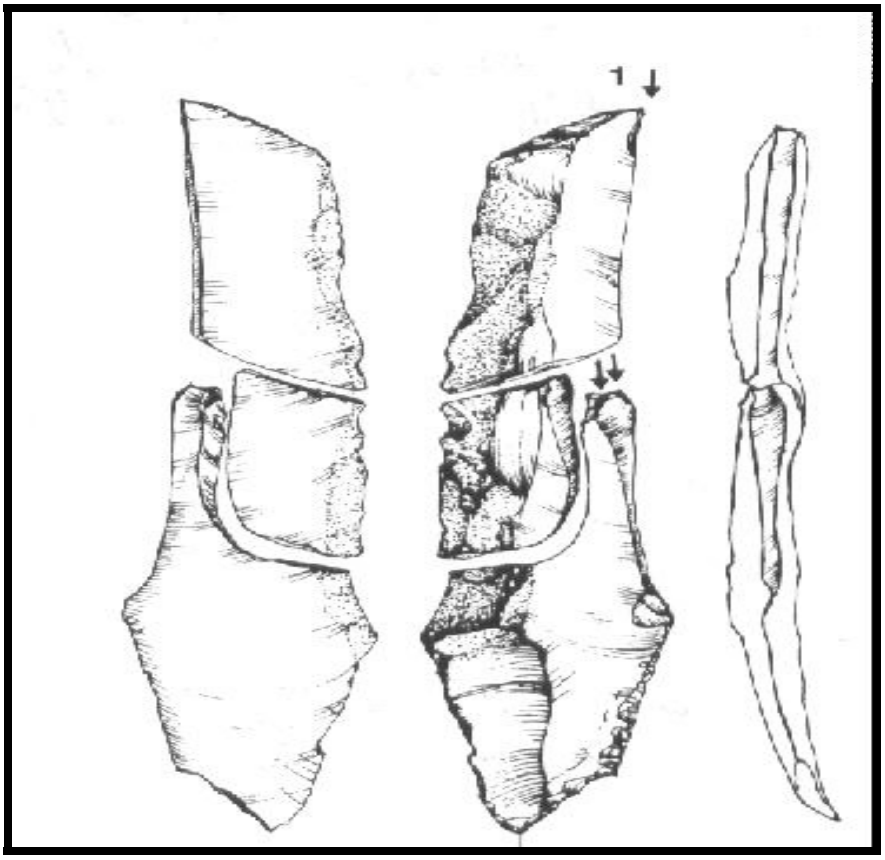


Figure 5.21: Burin on a straight truncation refitted to a dihedral burin on a break (after Barton, 1992: 121, fig. 4.19.1)

In the above illustration, the blade blank was originally retouched with one truncation in each end. Then, a burin spall was detached from the proximal oblique truncation (the proximal end is illustrated up here) followed by a medial break that removed the proximal truncation. Finally, a second burin blow was delivered on the break surface resulting in a dihedral (because of the previous facet) angle burin on a break. This time the spall plunged. Although the resharpening of the tool stopped here, its "life" had more stages. Post-excavation, the tool was refitted from the two burins and the plunging spall and it was restored in its initial bi-truncated shape. Finally, the complete truncation burin made it both in the HH monograph and in this thesis,

accomplishing two different goals. In the former instance it provides technological information and in the latter it serves as a relational example of object life history.

The final section of this discussion will deal with the complimentary social interfaces between subject and object, namely these of enchainment and accumulation. The former describes the web of relationships whereby humans and artefacts are distributed, yet at the same time are held together in socio-technical networks (Knappett 2006: 240). Enchainment equals relationships of exchange, where not only the material item but the personhood embodied in the thing is exchanged. The materiality of the item in circulation maintains the social memory of the whole and of the person, constructing thus an inalienable link between people and exchanged objects (Chapman and Gaydarska 2007: 1, 5). The above definition seems to be restricted in broken artefacts. This is understandable since they constitute the primary scope of his interest. I am inclined to see however the possibility of this approach to be extended to complete items as well. The use of the metaphorical value of artefacts in order to objectify social relations (Skourtopoulou 2006) brings me back to the point I started with, fragmentation. I mentioned there that the production of objects provide central metaphors for the construction of the self. The relevant example from Hengistbury is the intentional breaks. Elements of material culture can be moved, given or taken as signature signs. It is easy to envisage how the exchange and circulation of objects creates social relations and bonds. Enchainment however does not only take backed blade fragments moved as tokens of connection and alliance for Hengistbury Head to the Rhine or the Meuse. It can also be practiced in a metaphorical way. In this context, the objects become shared items in metaphorical circulation and are imbued not only with meaning but also with the essence of people, places and events that may be spatially and temporally distant (Brück 2006, 308). In psychological and cognitive terms, this important hybrid link correlates to the notion of "extended consciousness" (Damasio 2000), while within material culture it functions as mementoes and transitional objects (Parkin 1999).

Accumulation is easily understood as the concentration of people and objects in locales (see previous discussion about sets). With regard to Hengistbury Head, I have already mentioned spatial distribution concerning backed blades and intentional breaks. These artefact classes constitute two distinct homogenous sets, whose concentrations

partly coincide, although intentionally broken pieces show much lower evidence of burning. Based on these observations it has been suggested that the condition of the artefacts results from very different activities performed in the same area of the site (around the hearths or inside the hot embers). This could also be explained by events separated by relatively short time intervals (hafting in the hearth and knapping after the fire has gone out) (Barton 1992: 138). Such traditional horizontal distribution is based on analyses of frequency of presence. In my view, this kind of accumulation is not unrelated to the effect that objects have upon the relationship of people with the object world. I mentioned before that we judge objects not only because of their intrinsic value (social or otherwise) but also because of their place in our world. Thus, context is defined not only in stratigraphic terms but also socially. Context is an active repository of choices, active because the presence of any new object alters the landscape against which new choices will be made. All decisions, technical and social, are conducted against a backdrop of all past choices made and all present choices possible, choices which together address the question of how individuals could most satisfactorily realise their identity. Artefact distribution should not only take into account horizontal frequencies. The interpretation should open up the continuum between practice and meaning, identifying interwoven webs of objects in different situations. The two accumulation clusters in Hengistbury could be viewed as revealing small scale agency of daily routines allowing the community to exist and reproduce its structure (Skourtopoulou 2006). The burnt backed blades, might represent the pieces that got discarded in the same place they got ruined. This line of argument would agree with an unstructured discard of items that lost their usefulness. In a different context, the unburnt intentional breaks seem to have been accumulated where they have been knapped. The in situ accumulation therefore might not be an act of discard but a careful deposition of the knapped stone that would strengthen the notion of social reproduction and would agree with the interpretation of intentional fragmentation as somewhat symbolic. The concept of structured deposition relies upon the idea of the archaeological record being the result of intentional rather than physical actions, implying that it may be a way by which social groups define themselves and create social relations (Jones 2002b: 99-100).

To conclude the discussion on the FUP personhood materialisation as attested in Hengistbury Head, the social life and the construction of social identity is achieved through the practice of accumulation, which in turn is equally created in the continuum between fragmentation and consumption. It is true that elements of metaphorical enchainment can be detected in the archaeological record, depending upon the interpretation reserved for the intentional breaks. Given the complementary, rather than mutually exclusive, nature of accumulation and enchainment the above statement is neither unlikely nor false. I believe however that the case for enchainment is the weakest within the framework for a social life at Hengistbury and it was only offered here as a working scenario in order to provide a viable example for a relational interpretation of an element of material culture (in this case, intentional breaks). Schematically, the Lateglacial experience in the locale of Hengistbury Head can be put down as shown in Table 5.19.

Fragmentation (lithic overproduction & intentional breakage)	+	**Consumption** (resharpening & objects' life histories)	=	**Accumulation** (hybrid gatherings/ "sets" of people and artefacts

Table 5.19: schematic representation of the human personhood and social reality in HH

I hope I have shown that there can be achieved an understanding of a Lateglacial hunting camp beyond the functional and the rational. In a context of social practice, stone tools go beyond types and techniques in order to be meaningfully activated through embodiment and *habitus*. It is at the interface of place and things that human personhood is mobilised and contextually experienced.

5.7 SUMMARY

This chapter integrated the lateglacial site of Hengistbury Head into the theoretical discussion about aspects of human personhood and its emergence through

interaction with the world. The new perspective offered here is meant to act as complementary to the work that has been done and the ideas that have been put forward about the site and its lithic assemblage so far. A new way of interpreting technology was not the intention of this chapter. Rather, the aim was to expand the material culture considered from a technological perspective into including the social texture of negotiating a hunter-gatherer identity. This more reflexive proposal brought the human-object dyad in the forefront of interpretations and implications of lithic analyses.

The following sections will further validate the discussion presented here by providing more information that addresses the issue of a relational and multiple approach to Lateglacial identity.

CHAPTER SIX

Personhood during the Final Upper Palaeolithic in northern Europe. The case of Rekem, Belgium.

6.1 INTRODUCTION

The previous chapter presented the case study of Hengistbury Head as a means of testing the basic idea put forward in this thesis, that personhood emerges in the context of interactions among objects, places and people. It highlighted that persons are constructed through social actions and practices in given times and places. And that stone tools have a referencing capacity that stems from their biography; a capacity which, alongside cognitive and technical skills, evokes various associations and has social significance placed in its core. Consequently, the observed patterns in lithic data could be attributed to a bottom-up, relational, identity forming understanding of technology.

In the same vein, this chapter gives the background to, and an in-depth description of, the second case study, namely the Belgian site of Rekem. Once again, the main purpose here is to offer an alternative way of interpreting the data, one that takes inspiration from the theories of practice (Ingold 2000) and fragmentation (Chapman 2000; Chapman and Gaydarska 2007). Section 6.2 reveals the rationale behind the selection of Rekem. This is followed by a discussion of the archaeological background of the continental Final Upper Palaeolithic and Rekem's place in it (6.3). The description of the site in lithic and spatial terms, as revealed from the literature, gives insights into technological reconstructions, and tool biographies (6.4 and 6.5). The social implications of the lithic assemblage are discussed in 6.6. In effect, this section provides both a critique of the interpretations of Rekem published to date as well as a different explanatory approach in accordance with the research aims and methodology of this work. Finally, section 6.7 offers a summary of the chapter and provides the link to the next one.

6.2 REKEM: WHY SELECTING IT AS A CASE STUDY?

The Belgian site of Rekem does not have any established archaeological correlation to the British site of Hengistbury Head, especially since the dating of the latter is considered problematic (see section 5.4.1). Nonetheless, a common denominator is that both sites exist within the same overarching environmental and climatic frame of the Interstadial Complex (GI-1e-1a; ~15,450-14,000 cal years BP) of the Lateglacial. Additionally, despite the sea level rising of this period, the part of Benelux where Rekem is situated remained connected with the British Isles throughout the Pleistocene-Holocene transition (De Bie and Caspar 2000:14). I have chosen these sites because they represent the diversity of the Final Upper Palaeolithic in Northwestern Europe and therefore their contrast has greater potential for exploring the configuration of material culture and human identity.

In particular, Rekem was chosen because, when compared to Hengistbury Head:

- it is also an open-air site, with similar topographic features (proximity to a Lateglacial river) and lacking in organic preservation.
- it is also, because of its *sensu lato* contemporaneity, part of the wider debate about the Lateglacial industries and cultural relation and sequencing.
- it is also thoroughly excavated, exhaustively documented and exquisitely published (De Bie and Caspar 2000). But, as with Hengistbury Head, the impressively methodical and analytic two-volume Rekem monograph somehow lacks in social and cultural evaluation what it gains in a remarkable study of Lateglacial lithics (also see my discussion in Chapter 2).

For these reasons I believe that the Rekem stone tools are a good candidate to further test the ideas put forward in the Hengistbury Head analysis about personhood creation; and to see whether similar, but not identical, objects and object types can carry the same meaning (i.e. personhood mediators) in different contexts.

6.3 ARCHAEOLOGICAL BACKGROUND

The story of the Lateglacial cultural sequencing and chronology in northwestern Europe spans decades of rigorous debate and still remains largely unresolved. The most traditional European Late Upper Palaeolithic cultural group, which chronologically corresponds to the end of the LGM and the Lateglacial Interstadial, is the Magdalenian. Contrary to other Palaeolithic "cultures", the Magdalenian appears to be *a priori* linked to specific traits. For example, in the popular mind it is strongly associated with reindeer hunting (hence the old-fashioned name "l' âge du Renne"). It is also synonymous with the production of monumental parietal art like the cave paintings of Lascaux and Altamira, the widespread creation of portable art, the use of items of personal adornment like sea shells, the manufacture of an elegant and complex toolkit of blades and microblades and an elaborate use of worked bone, antler and ivory which is said to have served functional as well as aesthetic purposes.

The Magdalenian was originally recognised in southwestern France. In its classical archaeological sequence it consists of six phases numbered from I to VI (de Soneville-Bordes 1960), which represent an orderly chronological procession from about 18,000/17,000 to 11,000 / 10,000 ^{14}C years BP. Another phase, Magdalenian 0, has been added to the sequence in order to clarify matters of its origin and its evolution from the Badegoulian of Iberia and the region of Aquitain. These stages can be divided in two major chronological groupings: the lower or early Magdalenian of stages (0)-III (at approximately 18,000 –15,000 ^{14}C years BP) and the upper or late Magdalenian of stages IV-VI (about 14,000 –11,000 ^{14}C years BP), where the diagnostic element is the development of the barbed points made of antler (harpoons). In general, the Magdalenian lithic industry is characterised by microlithic blunted backed segments, many of which are triangular to geometric in shape (Gamble 1986). It should be noted however that there is no single site that documents the complete sequence. The early stages are provided by the stratigraphy of Laugerie-Haute, while the type-site for the later phases is the rockshelter of La Madelaine in the Dordogne.

For the northern part of Europe, the cultural equivalent of the Magdalenian sequence takes the form of a Lateglacial cultural taxonomy which, generally accepted as

it may be, it is still far from being geographically and temporally uniform. A very schematic synopsis is given in Table 6.1.

The oldest Lateglacial technocomplex is the Hamburgian (closely related but not identical to the Creswellian of the British Isles, see previous chapter), which dates to the Bölling interstadial. The lithic technology is based on blade manufacture and is of high quality. The slender, prismatic blades are usually struck from unifacial, bi-directional cores with oblique, opposed and faceted platforms. The predominant reduction strategy involves a careful preparation and trimming of cores. The toolkit includes the usual burins and end scrapers, as well as shouldered points, perforators (Zinken), backed and truncated blades, and tanged Havelte points (Eriksen 2000a). The Hamburgian assemblages are also called Shouldered Point Assemblages (SPA).

The Final Upper Palaeolithic is known as the *Arch-Backed Piece* technocomplex - *ABP*- and comprises groups like the *Federmessengruppen* in northern Europe and the *Azilian* in southwestern Europe (Street et al. 2001). There is a more detailed discussion of the Federmesser in the following section.

The entire Younger Dryas corresponds to the Tanged Point Assemblages (TPA). An early phase of the TPA can be detected (the "Bromme" complex), which largely coincides with the preceding Federmesser groups, but this is geographically restricted to sites lying too far north (southern Scandinavia, northern Germany) for the scope of this dissertation (Kozlowski 1999; Eriksen 2000a). The later phase of the Tanged Point complex is known under the general name of Ahrensburgian, a fine quality blade industry. Core preparation was sometimes extensive. Series of slender, prismatic blades were probably produced by soft- hammer direct percussion, while the very large blades were detached by a hard hammer. The tool inventory is characterised by small tanged points (Stielspitzen), micro- truncations (Zonhoven points), end scrapers and burins (Schild 1996; Eriksen 2000a).

Generic division of the arch. record	Technocomplex	Chronostratigraphy	GRIP	Uncal BP	Cal BP
Late UP	Hamburgian (SPA)	Bölling	GI-1e	13000-12000	15500-14000
Final UP	Federmesser (ABP)	Alleröd	GI-1c – 1a	12000 – 11000	14000-13000
Final UP	Ahrensburgian (TPA)	Younger Dryas	GS-1	11000 – 10000	13000-11500

Table 6.1: Schematic representation of the northern European Lateglacial archaeological record

6.3.1 Federmesser

Within the Lateglacial spectrum, the exact placement and nature of the Federmesser seem especially disputable and uncertain. Almost every one of its aspects appears somehow problematic: its onset (is it an Alleröd phenomenon or does it date before that?); its termination (does it stretch to the pre-Boreal or even to the early Boreal or is the Younger Dryas its chronological limit?); its geographical origins (is it the Magdalenian or the succeeding Hamburgian that gave rise to it?); its geographical spread (did it transform to the southern European Azilian?); its affinities (is there a temporal and cultural connection to the Creswellian of northern Europe?); its subsistence-settlement patterns and function (is it small ephemeral sites of mobile groups paying repeated short visits or larger residential settlements with more permanent structures occupied for longer periods of time?); its techno-cultural evolution (did it directly transform into the Ahrensburgian?).

In broad terms, the lithic assemblages are typologically primarily characterised by small curve- or angled- backed points (Federmesser, Rückenspitzen, pointes à dos, Arch-Backed Pieces), backed bladelets, blunt burins on truncation and short endscrapers. Technologically, the lithics are usually struck off single- and opposed- platform cores. The Federmesser complex is a typical blade industry with broad bi-directional, sub-cylindrical or conical cores where both soft- and hard-hammer direct percussion is used (Eriksen 2000a). The traditional assumptions about the ABP assemblages advocate that they are probably the direct successors of the Hamburgian in northern Europe and are

clearly related to the upper Magdalenian of central Europe. They are distributed throughout most of northwest and south Europe and they seem to be chronologically connected to the improved environmental conditions during the Alleröd interstadial (De Bie and Caspar 2000:21).

In terms of mobility and economy, the Federmessergruppen of the Final Upper Palaeolithic are generally restricted to the use of local raw materials of poorer quality, an expedient and less regularised lithic technology and smaller and apparently short-lived settlements. This picture is in contrast with the preceding Late Upper Palaeolithic (i.e. Final Magdalenian) technologies that are characterised by a standardised lithic production, the use of exotic raw material and a logistical settlement system (Barton and Roberts 1996; Barton 1999a; Fagnart 1997). The changes in mobility, as reflected in raw material procurement, and in the operational strategies employed in stone tool manufacture are often attributed to the wider changes in the Lateglacial climate and landscape (for example, the increasing growth of woodlands, especially during the second part of the interglacial, would have affected patterns of movement as well as the exploitation of different animals which would also reflect on the settlement systems).

However recent work suggests that more complex and varied technological and economic choices were in operation in Germany at this time with certain raw materials, alongside the locally available ones, being transported from distances nearing the 100km. (Floss 1991). In the Neuwied basin of the central Rhineland, large proportions of exogenous lithic raw materials at the Lateglacial open-air sites of Gönnersdorf and Andernach-Martinsberg show that there was contact with distant regions during both the Magdalenian and the *Federmessergruppen* occupations. Important among these are the north-west Meuse-Rhine drainage area and the regions up to 200km to the south-southwest (Street et al. 2006). Evidence from animal exploitation also points to variability most possibly attributed to seasonality: more homogeneous lithic and faunal spectra indicate winter activities, whereas more diverse lithics and fauna are associated with summer activities (Street 1997). The observed variability and complexity in technological and mobility strategies is further supported by new evidence from newly excavated Final Palaeolithic sites in Britain (Conneller 2007).

In the Benelux, exclusively open air Federmesser sites are best known from the sandy areas of the lowlands. This means that they are effectively unstratified, void of organic material and therefore lacking seriously established absolute chronology. Débitage is generally characterised by a simple blade technology, where backed pieces, burins and end-scrapers are the most common tool types. The examination of large settlements (such as Meer and Rekem) has revealed hearths and the probable existence of residential structures, as well as use of intra-site areas for differential activities (De Bie and Caspar 2000:20-21).

6.4 REKEM

The site of Rekem is situated at the left bank of the river Meuse, in the northeastern part of the Belgian lowlands, near Maastricht (Fig.6.1).

Figure 6.1: Location of the site of Rekem (50º54'54'' N, 5º41'24''E).

The prehistoric remains were systematically excavated from 1984 to 1986 and were assigned to the Lateglacial *Federmesser* cultural group. The site was found on a sandy

elevation of Late Weichselian age, whose acidic environment did not permit any organic preservation, so that, with the exception of a single presence of resin and very rare charcoal, only lithic and mineral remains were recovered. The elevated sand ridge of the Federmesser Rekem was situated on the edge of a Lateglacial river bed. The position of the site in a river valley near raw material sources and near presumed animal congregation places would render it an attractive location for intermittent visits by Lateglacial hunter-gatherers.

The Federmesser stone artefacts distinctly formed 16 spatially discrete units (loci 1-16), twelve of which (lithic scatters Rekem 1, 4-8, 10-13, 15 and 16) are collectively identified as "habitation zone 1". This cluster, orientated NW-SE, extends over a surface of about 80 x 35m and includes larger and smaller concentrations. The large concentrations (Rekem 10, 5 and 6) include evidence of decomposed structures, defined by numerous quartzite and sandstone pebbles, most of which show traces of burning. The remaining four concentrations (Rekem 2, 3, 9, 14) possibly belong to neighbouring habitation zones (Fig. 6.2).

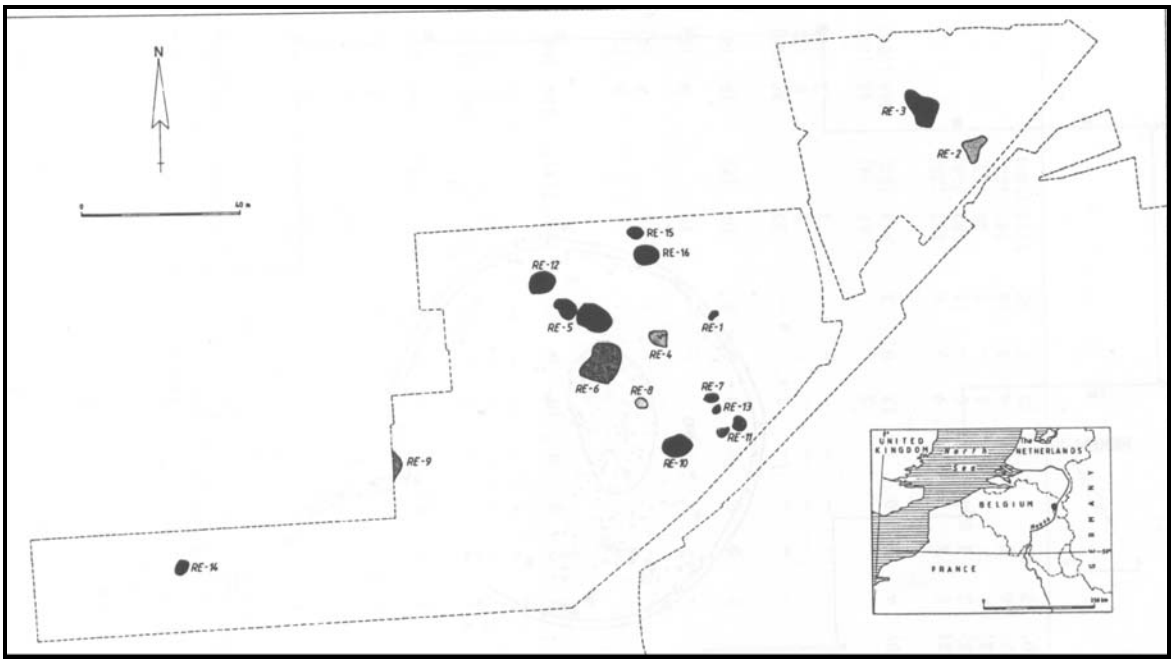


Figure 6.2: Rekem, the 16 excavated loci (Caspar and De Bie 1996: 439)

Within habitation zone 1 (Fig. 6.3), two groupings can be detected along an imaginary line. The western front consists of mainly large concentrations (from south to north Rekem 10, 6, 5, 12 and the somewhat smaller Rekem 8) as opposed to the eastern front with the small and almost circular in plan areas (Rekem 11, 13, 7, 4, 1, 16 and 15).

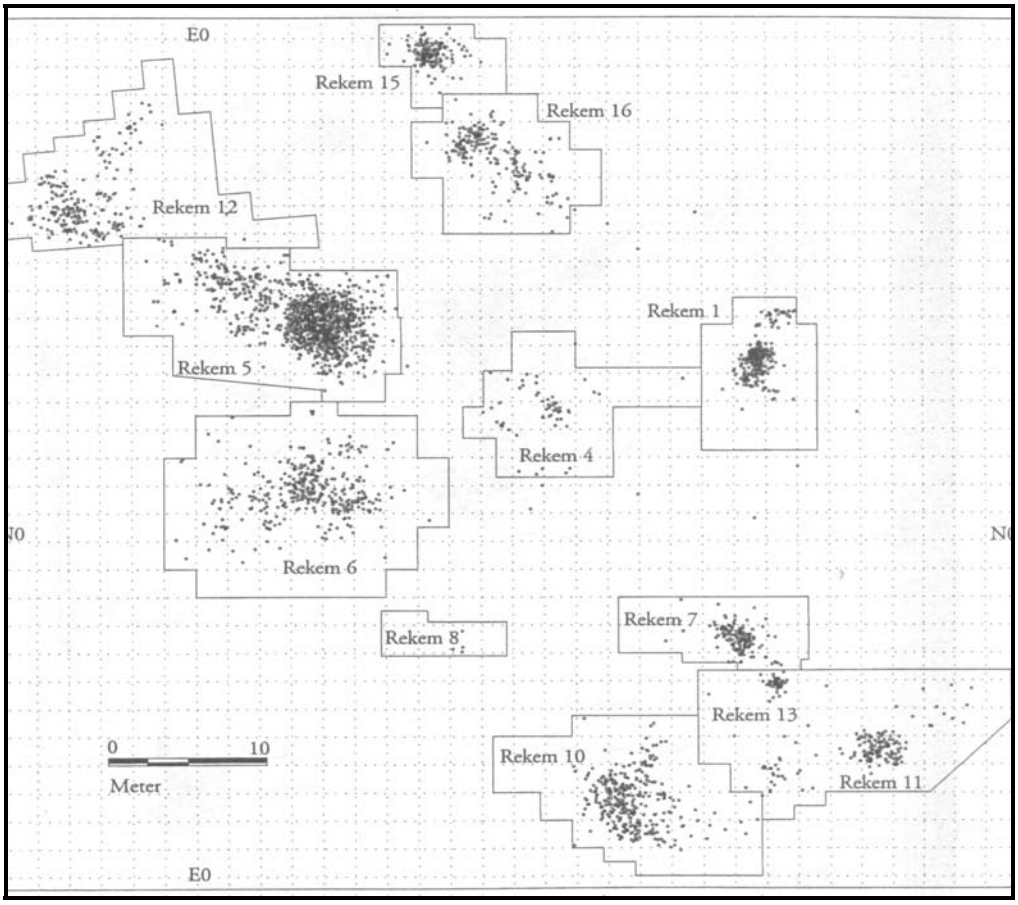


Figure 6.3: Rekem, Habitation Zone 1. Flint tools, cores and refitting artefacts (after De Bie and Caspar 2000: Map 26).

A further west-east differentiation views the large concentrations as more readily associated with palimpsestual activities based on the possible presence of hearths and on traces of a structure at Rekem 10. These are readily identified as domestic areas of about 50 to 60 m^2, with the notable exception of the much smaller in surface Rekem 1 which is rather interpreted as a refuse area. In these large and dense settlement units, a sequence

of processing and maintenance activities occurred. The hearth areas[14] seem to have attracted activities related to game procurement, butchering, food processing, and bone and antler work, as well as tool repair and disposal (De Bie 2007). By contrast, the smaller concentrations in the eastern sector represent specialised areas where limited activities, like tool production, were taking place (Table 6.2). Refitting and spatial distribution studies suggest a simultaneous occupation of both the small knapping spots and the large domestic units. Moreover, considering that it was highly unlikely that the site was successively abandoned and reoccupied, the excavators define habitation zone 1 as a single-occupation camp that was inhabited by one group of hunter-gatherers during a continuous period (De Bie and Caspar 1997, 2000; De Bie et al. 2002).

	Locus				
Domestic Area (retooling/ repair)	5	6	10	12	
Specialised Area (production/ manufacture)	7	11	13	15	16
Isolated Finds	4	8			
Discard Area	1				

Table 6. 2Habitation Zone 1: function and use of each of the spatially distinct areas

6.4.1 Dating Rekem

The only acceptable radiocarbon date from the site comes from the resin on a curved back point from Rekem 7. Another four radiocarbon dates on charcoal had to be dropped as inaccurate after being considered intrusive (De Bie and Caspar 2000:41). The single acceptable measurement provides an **AMS date of 11350 ± 150 BP** (OxA-942). When calibrated using the CALPAL-Online program this becomes 13262 ± 179 calBP.

[14] The presence of hearth(s) at Rekem is repeatedly referred to in all relevant publications although none has been actually found and neither have any secondary associated features like soil discoloration or charred materials. Its existence is not unreasonably inferred by spatial distribution of stones and thermally fractured slabs.

This Lateglacial (within Alleröd) placement of Rekem is further supported by thermoluminescence dating of burnt rocks. The eight determinations offer a weighted mean of 12200 ± 1100 BP (Ox88TLi-246) (De Bie and Caspar 2000: table 6). The TL date correlates well with the average TL age of 12500 ± 1150 BP from Hengistbury Head. It becomes obvious then that absolute dating can only be used as a positive indicator for the Federmesser chronology of the site rather than an undoubted proof.

6.4.2 Non-flint finds and possible structures

In terms of finds, the Rekem assemblage comprises exclusively of lithic and mineral materials. The former consist of artefacts (débitage and formal tools) made on flint, while the latter are mainly sandstone blocks, quartzites, and quartzes and some ochre.

Most of these rocks are to be found in the larger sectors of the western half of habitation zone 1. Many are altered, either by fire (quartzites may have been used as cooking stones according to the excavators) or by purposeful modification to turn them to heavy duty tools for chopping, hacking, sawing, grinding, cutting or digging. Others seem to have served as structural elements in hearths and dwellings although there are no direct spatial arrangements indicating structural organisation. The existence of hearths however is mirrored in the burnt character of the stones (thermal fragmentation). At Rekem, the absence of structural evidence is not necessarily evidence for organised fire-use absence. The fireplaces could have undergone cycles of building-use-dismantling-rebuilding-reuse-abandonment, which hardly leaves any evidence behind (De Bie and Caspar 2000).

As for the possible existence of closed dwelling structures, at the western part of Rekem 10 almost all the larger blocks displayed a semicircular pattern which could be interpreted as boulders used to weigh down a tent cover. A combination of morphological, technological, functional, and refitting analyses at Rekem 10 infers the existence of a circular dwelling with a diameter of 5-6 m and with an inside hearth (whose presence is unquestionable but its precise location and shape is unknown). The

distribution of flint artefacts in and around the presumed dwelling as well as use-wear analysis indicate a series of domestic activities: the processing of bone/ antler, the working of hide and maintaining the hearth were happening inside the dwelling; re-tooling and re-sharpening of backed pieces and burins were taking place both inside and in front of the dwelling. This integrated information points to extensive habitation, though not necessarily by a large group of people (De Bie et al. 2002).

At Rekem, none of the non-flint materials occur naturally on the LG surface of the site. It is accepted that all items have been carried in the site albeit the distances covered need not be long. Most raw materials could be collected locally from exposed river-terraces or from the riverbed, which was not more than a few hundred metres away (De Bie and Caspar 2000). It is also possible that a certain selection at the natural resource would take place so as to facilitate the transport and/ or to accommodate intended future uses (e.g. large and flat rocks for structural slabs and small spherical cobbles for hammerstones). There are however two non-local instances of mineral transfer: first, a block of haematite (ochre) whose natural provenance is not defined and can be placed anywhere along the course of the Meuse and second an iron sandstone whose outcrop is today situated 30 km to the west (De Bie and Caspar 2000). On the whole, it has been shown by refitting and spatial studies that the rocks at Rekem are a very mobile class of objects. They appear to be travelling both between (39 instances of inter-locus refits) and within concentrations (715 instances of intra-locus refits) (De Bie and Caspar 2000: table 11, p.49).

6.5. REKEM: DESCRIPTION OF THE LITHIC ASSEMBLAGE

At the heart of this case study lies the examination of stone artefacts as an example of intricate and meaningful connection between material culture and social practice. It is at this intersection that personhood and human identity emerges.

At Rekem, the lithics have been exhaustively and expertly studied using a thorough typo-technological analysis and a painstaking refitting programme, which succeeded in conjoining a remarkable 21.4% of the entire assemblage in one of the 521

refitting groups. Microwear and use wear analyses have also been carried along with some experimental projectile impact studies. Finally, an intensive spatial patterning of all sixteen lithic scatters has added more data and insight into raw material distribution, areas of specific use and several distinct activities. All this wealth of information is presented in the two volumes (the second is entirely dedicated to illustrations) of the Rekem monograph (De Bie and Caspar 2000). In terms of data, the present section of the thesis is almost exclusively based on the monograph. In the instances it is informed by other publications a clear reference is given.

The Rekem lithic assemblage contains 23,496 artefacts. More than half of them (12,143) are chips and, since they lack technological information because of their small size (smaller than 2cm), they are not included in the analysis. Table 6.3 provides a general overview of the assemblage composition. Two initial remarks will be made here. First, the high ratio of débitage to cores is expected. Second, a substantial fragmentation of the lithics is obvious even at first inspection. The non-complete blades and flakes form more than a third the entire débitage (a total of 3,375 broken items out of 9,005).

The Rekem lithics are made exclusively on local flint of varying quality. The raw material is grouped into two major categories: fine-grained (category 1) and coarse-grained (category 2) flint.

The average ratio of cortical blanks at Rekem is a little more than 30% (De Bie and Caspar 2000:115, table 35). This essentially means that almost a third of the complete blanks (fragments are not considered since they may have lost cortical part) are covered with cortex on at least one third of their dorsal surface. Of course the variation in the amount of cortex reflects the variation of the débitage activity. Therefore cortex variability at the various areas suggests variability in the débitage activity in these areas. For example, in production stations like Rekem 15 and 16 primary flaking with more cortex is abundant, whereas in habitation areas like Rekem 10 occurs elaborate blade production/ retooling with less cortex. Refitting sequences suggest that decortication of the nodules was essentially absent (De Bie and Caspar 2000: 103). The large number of cortical blanks (see Table 6.3: a total of 1,804 cortical flakes and blades) should therefore be seen more as the products of the immediate start of the knapping sequence rather than a deliberate initial peeling of the nodule.

Cores	215	0.9%
Prismatic	***85***	***0.4%***
Pyramidal	***38***	***0.2%***
Globular	***17***	***0.1%***
Flat and Irregular	***35***	***0.1%***
Broken	***26***	***0.1%***
Tested Blocks	***14***	***0.1%***
Technical Pieces	**356**	**1.5%**
Crested Blades (and bladelets)	*241*	*1.0%*
Tabular Flakes	*59*	*0.3%*
Core Flancs	*56*	*0.2%*
Débitage	**9,005**	**38.3%**
Flakes	*3,029*	*12.9%*
Flake fragments	*1,692*	*7.2%*
Blades (and bladelets)	*797*	*3.4%*
Blade (and bladelet) fragments	*1,683*	*7.2%*
Cortical flakes	*1,390*	*5.9%*
Cortical blades	*414*	*1.8%*
Chips	**12,143**	**51.7%**
Debris	**96**	**0.4%**
Tools	**977**	**4.2%**
Edge-Damaged	**302**	**1.3%**
Burin Spalls (& Krukowski microburins)	**402**	**1.7%**
TOTAL	**23,496**	**100%**

Table 6.3: General inventory of lithic artefacts (simplified from monograph Table 13, p.59)

In the following two sections I will discuss the primary (cores and débitage) and the secondary (retouched tools) technology respectively.

6.5.1 Débitage and cores

6.5.1.1 Débitage: blades and flakes

At Rekem, a total of 9,005 unmodified blanks of dimensions bigger than 2cm have been recorded. Their technological features, including overall dimensions, dimensions and types of platforms, descriptions of bulbs of percussion, blade profiles etc are not considered in great detail in the monograph because their recording is an ongoing project. This is an obvious difference from the Hengistbury Head analysis where metrical data allowed statistical distinctions

of dimensional groups (see Chapter 5). However, technical attributes of a small sample of débitage products are recorded for a diachronic study and they allow for a general appreciation of technical and qualitative attributes.

In the lithic analysis the term blade(let)s is used throughout. It has been applied by the authors to "every removal whose length is at least equal to twice its width and which has more or less parallel edges" (De Bie and Caspar 2000: 58). This definition does not take into account the conventional width threshold of less than 12 mm and effectively the blade(let) category lumps together items of diverse dimensions. As a result, laminar elements could range from long elegant blades to short poorly standardised items. Furthermore it is obvious from the general inventory that the category "laminar flake" is absent, even if it is included in the discussion about core-use and technology (Table 6.4 shows clearly that the assemblage contains at least 60 cores destined for the production of laminar flake blanks). Apparently when the notion was introduced by the analysts somehow later, during the refitting studies, it was obvious that "laminar flakes are in fact the most characteristic blanks of the assemblage, and would appear to be the intended product" (De Bie and Caspar 2000: 58).

Flakes (again without metrical data) are mostly complete. There is no systematic patterning regarding the organisation of their dorsal negative removals. Information from the random sample recorded for qualitative and technical attributes shows that the majority of platforms in both blade(let)s and flakes are plain. Other types, i.e. cortical, dihedral, facetted or linear do occur, but they are far less common. Spurs (talon en éperon,) are completely lacking. It appears that there is no distinction in platform types regarding blades and flakes. This comparability is somewhat opposed to the observations on platform preparation, where a strong preference of facetted platforms is noticed on laminar cores (see next section). This contradiction can be partly explained from the larger platform dimensions of the flakes; bigger platforms are more likely to detach a previous removal of the core's striking platform than smaller ones.

6.5.1.2. Cores

Rekem has produced 215 cores (Fig. 6.4) including 26 core fragments and 14 tested blocks. Leaving aside the pieces which are not informative of the knapping process, a total of 181 items are analysed and discussed.

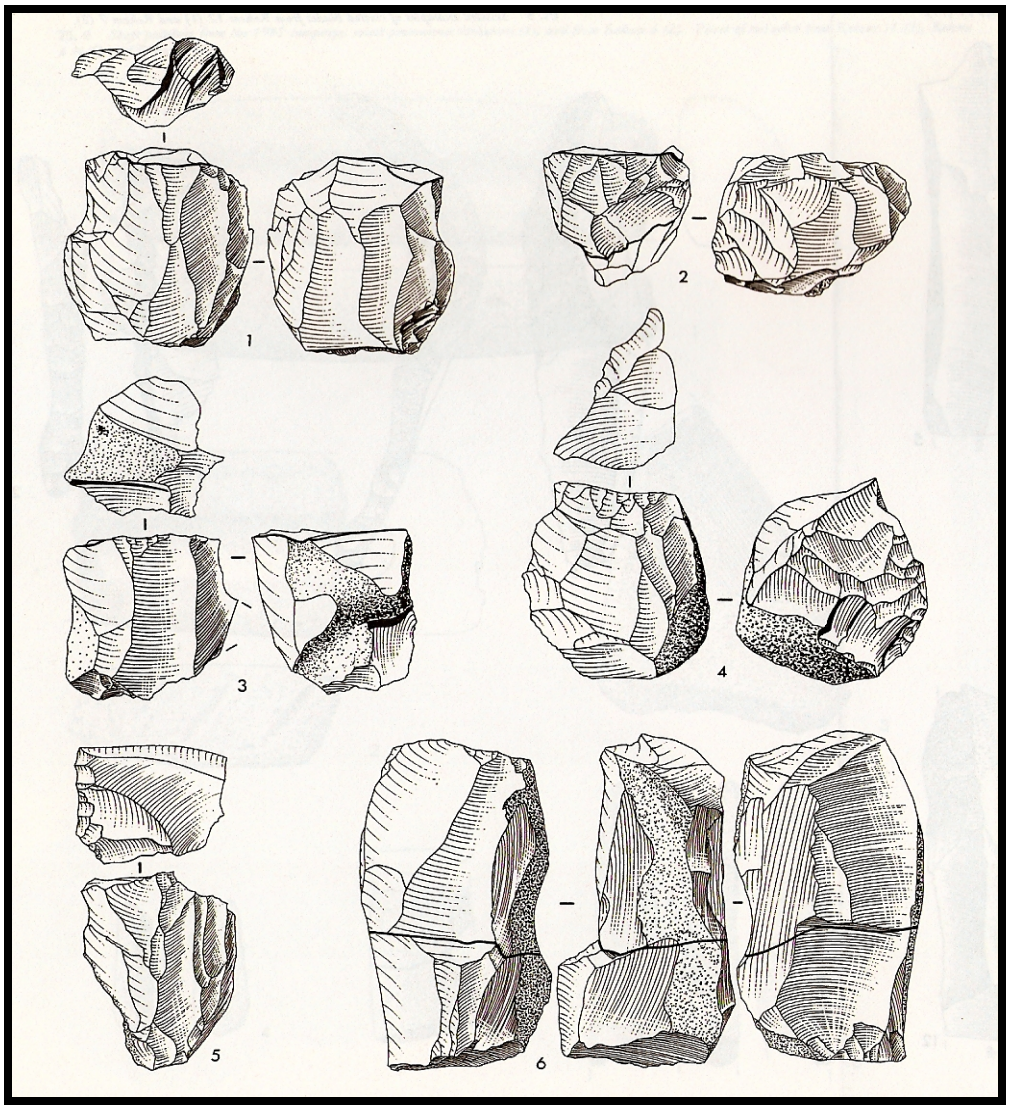


Figure 6.4: Cores from Rekem (scale 1:1): 1, 6: prismatic blade cores with two opposed platforms; 2: globular flake core with two platforms; 3, 4: prismatic single platform cores for laminar flakea; 5: pyramidal single platform laminar flake core (De Bie and Caspar 2000, vol 2: plate 10).

The core assemblage exhibits a poor degree of standardisation (Table 6.4). In terms of morphology, almost half of the 181 items have a prismatic shape; about a fifth of them are pyramidal, 17 are globular, 15 are flat, 20 are regular and another 6 are core fragments. As for the number and position of platforms, the majority of cores have either

two (almost exclusively opposed) platforms, or a single one. The multiplatform cores are limited to 11. It therefore seems the débitage at Rekem was mainly organised from at least two opposed striking platforms. Unsurprisingly, it is blade cores that predominate (77) and in ascending order cores serving for the manufacture of laminar flakes (60), bladelets (25) and flakes (18) make up the assemblage. The first two most common categories mostly have a prismatic shape, since 74 of the 85 prismatic cores are meant for blade and laminar flake production. By contrast, bladelet cores are mostly pyramidal, with prismatic shapes being a close second, whereas flakes are more often struck off globular cores (Table 6.4).

A final comment concerns platform preparation. Just over half of the cores have either natural/ unmodified or plain platforms, or a combination of the two. The rest of the cores appear to be at least partly facetted in order to facilitate adjustment of the flaking angle (De Bie and Caspar 2000: 63). With regard to platform preparation and intended blank production, 61% of blade cores carry facetted platforms. In the rest of the core forms, facetting represents one third of platform preparation and natural or plain striking platforms are the most frequent type.

Number & position of platforms	**Core Morphology**							
	Prismatic	Pyramidal	Globular	Flat	Irregular	Broken	N	%
Single	23	26	5	11	6	4	75	41%
Two opposite platforms	62	12	4	3	8	2	91	50%
Two crossed platforms	_	_	_	1	3	_	4	2%
Multiple platforms	_	_	8	_	3	_	11	6%
N %	85 47%	38 21%	17 9%	15 85%	20 11%	6 3%	181	100%
Type of Blank Production								
Blades	49	14	-	8	3	3	77	
Bladelets	8	12	1	2	2	-	25	
Laminar Flakes	25	11	8	4	10	2	60	

Flakes	3	1	8	1	4	1	18
Undetermined	-	-	-	-	1	-	1
N	85	38	17	15	20	6	181

Table 6.4: Collective Core attributes: morphology, platforms and blank production

6.5.1.3. Discussion of débitage and cores: flint knapping at Rekem

The locally available flint was mainly used for the production of laminar blanks i.e. blade(let)s and laminar flakes. The absence of primary (cortical) flakes and blades in the refitting sequences indicates an apparent lack of interest for the initial shaping of the nodule. The core reduction starts with the immediate removal of the initial laminar products (these are the cortical flakes and blades of the general inventory of Table 6.3). Regarding the initial shaping and maintenance of the cores, the assemblage seems to be guided by the shape of the nodule with very limited preparation and organisation (cresting, though familiar as a controlling technique, is not used in any systematic way; there is instead a preference for the use of the natural ridges of the core. Similarly refits show that core tablets, tabular flakes, rejuvenation flakes and core flancs are used in very inconstant and versatile ways (De Bie and Caspar 2000: 104).

At Rekem, the flint knapping production is equally inconsistent when put in quantified terms. Well reconstructed refits reveal a lack of correlation between the size of the original volumes and those of the ultimate cores: some cores were abandoned before half of the original volume had been consumed, while other knapping sequences managed to transform more than 90% of the raw material into flakes and blades. Another implication of this extreme variation is that the number of artefacts by reduction sequence was also highly variable. Very tentatively and cautiously, the authors based on their best refitted co-sets suggest an average production of 50 artefacts per core (De Bie and Caspar 2000: 107).

One aspect that can be studied with the Rekem lithic assemblage is the possibility of deliberate blank selection. What I am interested in here is to examine whether the shape and size of the flint supports for the tools were a matter of preference. In other words, was there in place a predetermination of appropriate blanks to carry specific tool

types? What blanks were desired? What end products were intended to be made on them?

De Bie and Caspar (2000: 109 and throughout chapter 5 of the Rekem monograph) have devised a classification system for the identification of the original blanks of tools that is based on dorsal scar patterns. This data suggests that in general, products resulting from the early stages of knapping (covered with cortex), or technical pieces (trimming flakes, irregular blanks, rejuvenation pieces) are certainly not excluded from tool selection. On the whole, and leaving the laterally modified (backed) pieces aside, blanks used during tooling activities are very diverse formally and morphologically. As it was expected, backed pieces are produced on laminar elements and furthermore there is a preference for narrow blades. In dimensional terms, more than two thirds of the tools appear to be made on blades rather than flakes.

Another question related to blank preferences is whether these are actually accommodated by specific reduction strategies. Tools refitted to co-sets attest to the fact that the tools produced from single cores were mostly of the same, or at east related types (e.g. burins and truncations). It seems therefore that there exists a willingness and intension for cores to be handled with regard to specific tool types. By contrast, there is no evidence to suggest that the desire for specific blanks for specific tools was achieved by particular reduction strategies.

6.5.2 Retouched Artefacts

At Rekem, a total of 977 intentionally modified flint tools were recorded. All common Federmesser tool types are present. The three major categories are laterally modified pieces (LMP comprising of points, blades and bladelets); burins and end-scrapers. The two thirds of the entire tool assemblage (65%) are made of LMP and burins. Their relative importance varies considerably at different concentrations, and this variability is attributed to functional and contextual reasons (De Bie and Caspar 2000: 121). Numerically less important are truncated tools, borers and becs, composite tools, and randomly retouched pieces. This section will only focus on the first three predominant tool types.

LMP	**363**	**37%**
slender	***297***	***30%***
large	***66***	***7%***
Burins	**274**	**28%**
End-scrapers	**170**	**17%**
Truncations	76	8%
Perçoirs/becs/ borers	41	4%
Other Retouched Pieces	33	3%
Composite Tools	20	2%
Tool Total	**977**	**100%**
Tool Waste	402	
Burin spalls	*360*	
Krukowski microburins	*42*	
Edge damaged pieces	302	

Table 6.5: General inventory of tool types, tool waste and edge-damaged pieces. Laterally Modified pieces, burins and truncations are the three most common types (~ 82 %)

6.5.2.1. Laterally modified Pieces (LMP)

The 363 LMP are either steeply backed or only minimally retouched (like examples g and i in Fig. 6.5) on one or both edges. On average, backing reduced the width of the original blades by about 3-4mm. The plotting of maximum width and thickness of LMP reveals a predominance of slender elements. This observation justifies the division of the tools into two categories: one narrower (N=288) and another wider (N=58).

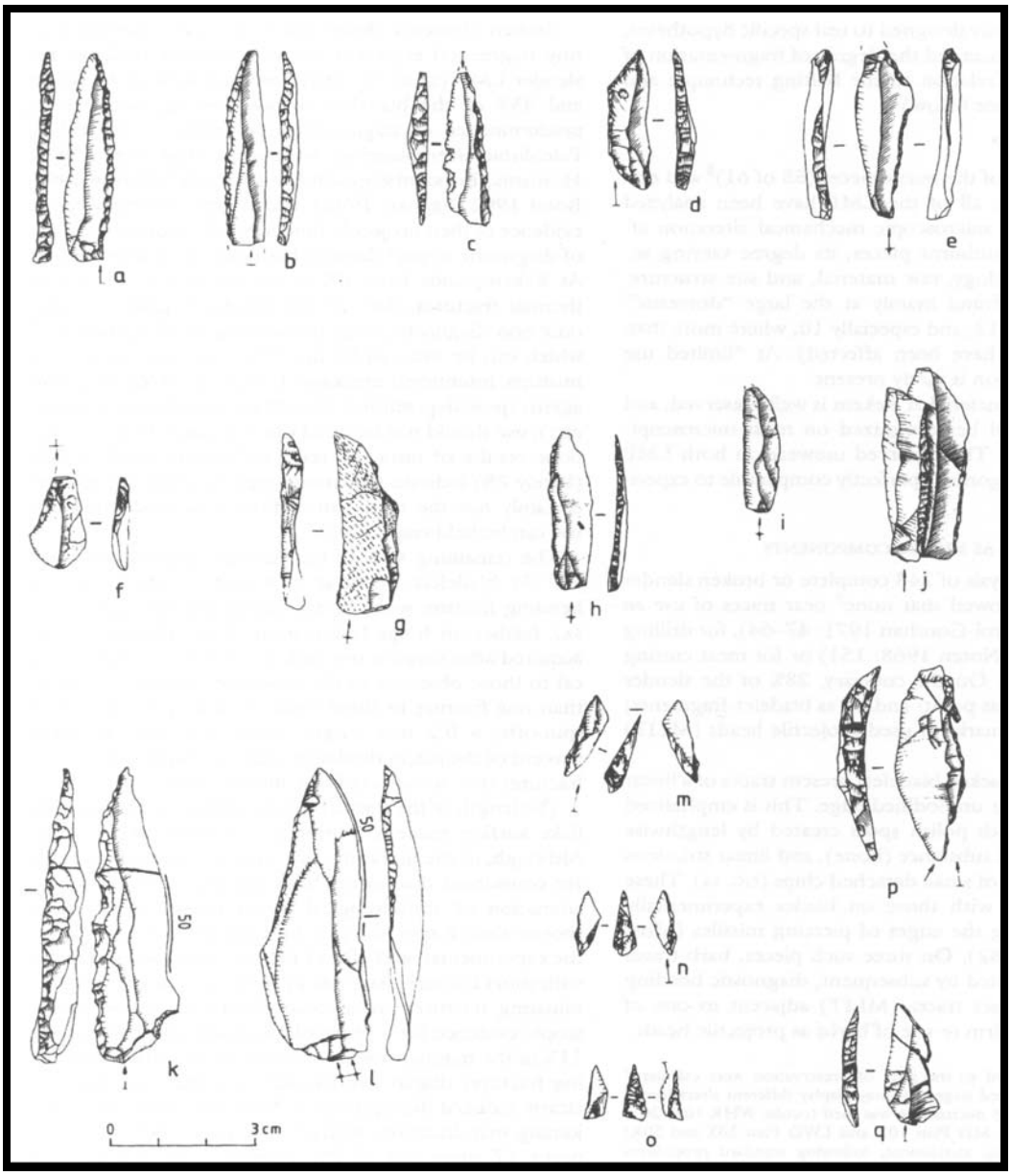


Figure 6.5: Laterally modified pieces. a-b, g: curved backed points; c-e: backed points (d is a creswell point); f: obliquely truncated point; h-i: backed bladelet; j: two backed bladelets refitted; k: curved backed pointed blade; l: backed pointed blade; m-o: microburins; p-q: refits of microburins on backed pieces (Caspar and De Bie 1996: 443)

Of the slender LMP, two-thirds consist of laterally modified bladelets and one-third of backed points. The large LMP have been subdivided into pointed and unpointed blades. In terms of function of LMP, microwear analysis (Caspar and De Bie 1996) showed slender pieces to be exclusively used as light projectiles, whereas large pieces to

either be butchering tools or unfinished/ discarded implements of some kind (tooling accidents) (Table 6.6). Use-wear and refitting analyses prove that LMP did not normally have extensive life cycles. They were purposefully made to arm arrow shafts and were abandoned after damage occurred without usually having been resharpened (De Bie and Caspar 2000: 123-135).

Type	N	%	Use
Slender LMP (W<=12mm)	297	82%	Light projectile components
Backed Points	*102*	*28%*	
Laterally Modified Bladelets	*195*	*54%*	
Large LMP (W>=12mm)	66	18%	Butchering tools or discarded tooling accidents
Pointed Blades	*19*	*5%*	
Unpointed Blades	*47*	*13%*	
Total LMP	363	100%	

Table 6.6: Classification of Laterally Modified Pieces

An important characteristic of laterally modified pieces at Rekem is their intra-site spatial distribution. Manufacture, repair and discard of backed elements were spatially differentiated: the locations of Rekem 7 and Rekem 11 were used as spots for primary LMP production of both slender and large pieces. Conversely, Rekem 10 (which is thought to be a habitation area, (see section 6.4) and Rekem 5 show evidence for retooling activities, where used arrows had heads replaced by new LMP. In these locations, LMP are clearly dominated by slender elements. Finally, the high density of morphologically and functionally very distinct tools in correlation with the fact that very few of them could be conjoint suggest that Rekem 1 was a dump zone (Caspar and De Bie 1996).

6.5.2.2 Burins

At Rekem, the 274 burins consist of 222 simple and 52 multiple types (Table 6.7). Burins (Fig. 6.6) in their final form frequently preserve remnants of earlier features and therefore previous phases of their biographies.

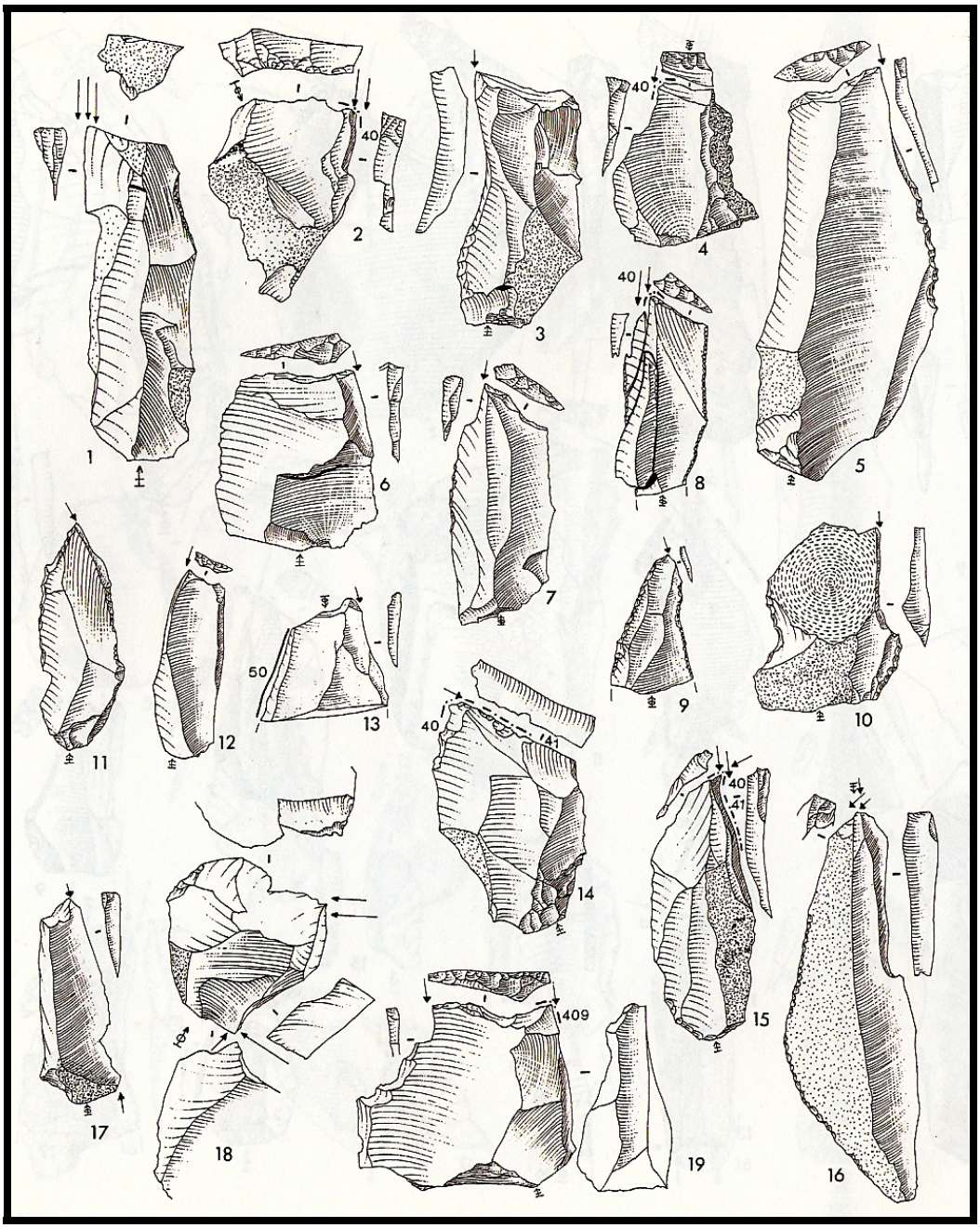


Figure 6.6: Burins (scale 1:1). 1-2: on unmodified end; 3: on broken end; 4-9: on truncation; 10-14: atypical Lacan burins; 15-16: dihedral burins; 17-19: multiple burins (De Bie and Caspar 2000, vol.2: plate 76).

The refitting of burins with spalls and with fragments of their blanks allows for a detailed examination of their life cycles, from manufacture, to use, consumption and discard. In all, 66 burins could be conjoint with at least one burin spall. Thus 124 previously unknown phases of their biographies before final discard could be illustrated. The reconstructed phases confirm that burins are a very dynamic tool type. In the course of the "use-resharpening-reuse" cycles, they are frequently classified as different types: either as a new burin with a new burin edge often of different type, or as a different tool altogether (especially becs). Burins are the most obvious expedient tools at Rekem and as such they are neither curated nor kept apart for successive tasks. Many may be abandoned, even if they are still potentially efficient or could be successfully rejuvenated. The finished forms thus totally depend on the moment of abandonment. The burin types at Rekem, therefore, do not reflect strict mental templates on the part of the artisans. For burins, preconceived forms were not desired or aimed for. The apparent typological variability is the result of successive sequences of resharpening, based on functional and technological , among other, causes (De Bie 2007: 37-38). Microwear analysis suggests that burins were actively used on the trihedral corner of the burin edge as well as along the burin facets. The worked material mainly consisted of bone or antler, hide, carcass, wood and mineral matter (used as fire-lighter) (De Bie and Caspar 2000: 153).

BURINS	**N**	**%**	**Contact Material**	**Active Part**
Simple Burins	222	81%		
On truncation or retouched edge	*84*	*31%*	Bone/Antler	Burin Edge
Dihedral	*56*	*20%*	Hide	Burin Facet
Atypical Lacan	*49*	*18%*	Mineral matter	(unmodified
On a break	*17*	*6%*	Carcass	edges, dorsal
On unprepared edge	*16*	*6%*	Wood	ridges ..)
Multiple Burins	52	19%		
Total	274	100%		

Table 6.7: Classification of Burins

6.5.2.3 Scrapers

Scrapers (Fig. 6.7) are numerically the third category of tool at Rekem.

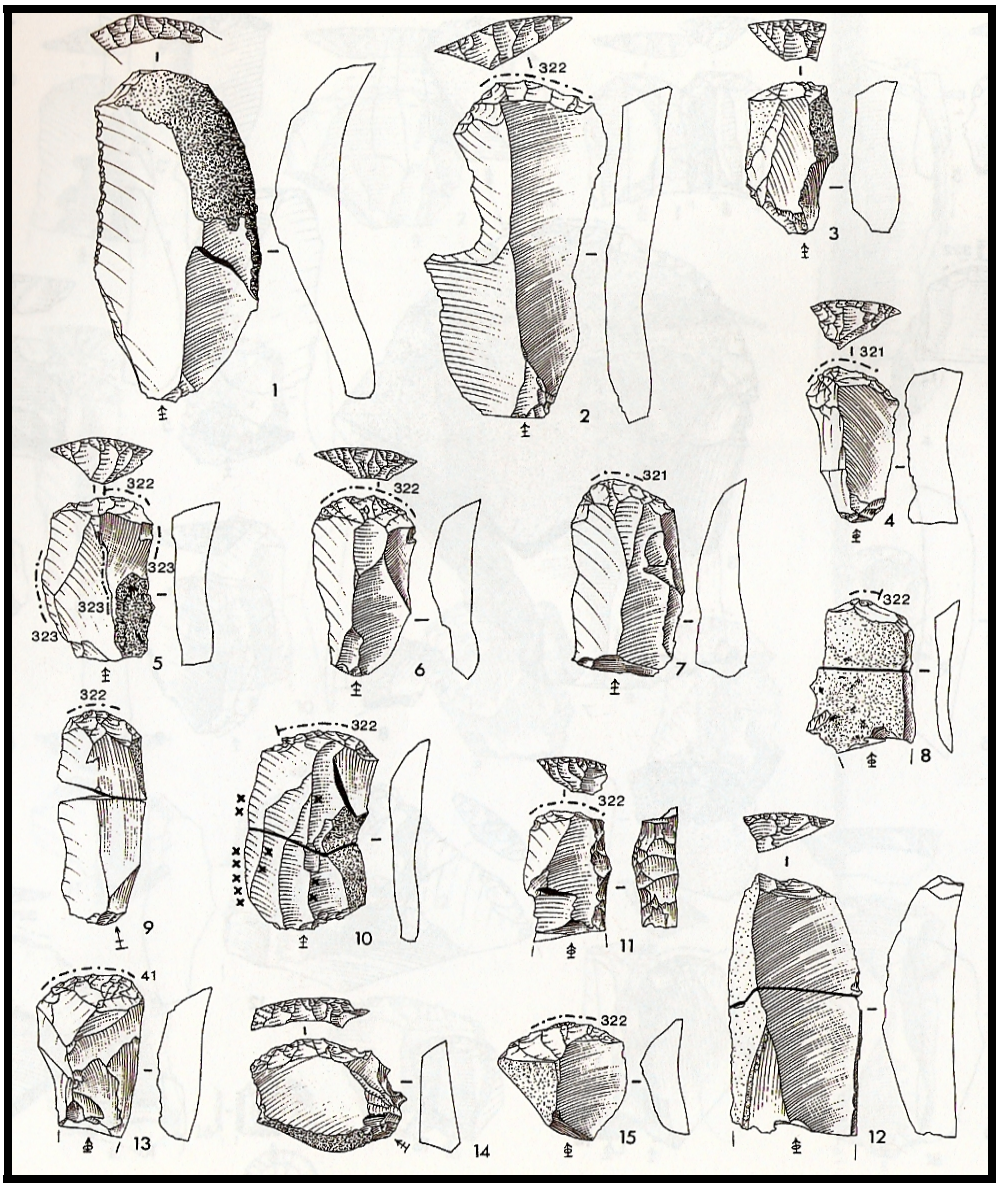


Figure 6.7: Scrapers (scale 1:1). 1-13: end-scrapers on blade; 14-15 end- scrapers on flake (De Bie and Caspar 2000, vol.2 : plate 92).

The majority are made on flake, including 28 end-scrapers on broken flake, and 10 thumbnail-scrapers (Fig. 6.8). There is a tendency for the blanks selected for end-scrapers (both flakes and blades) to be regular with parallel edges and ridges. Only two flake scrapers have double scraping edges. A large majority (93%) of the scraper heads

on both flakes and blades are placed at the distal end of the blank. Only 12 scrapers, including the two double, are proximally retouched.

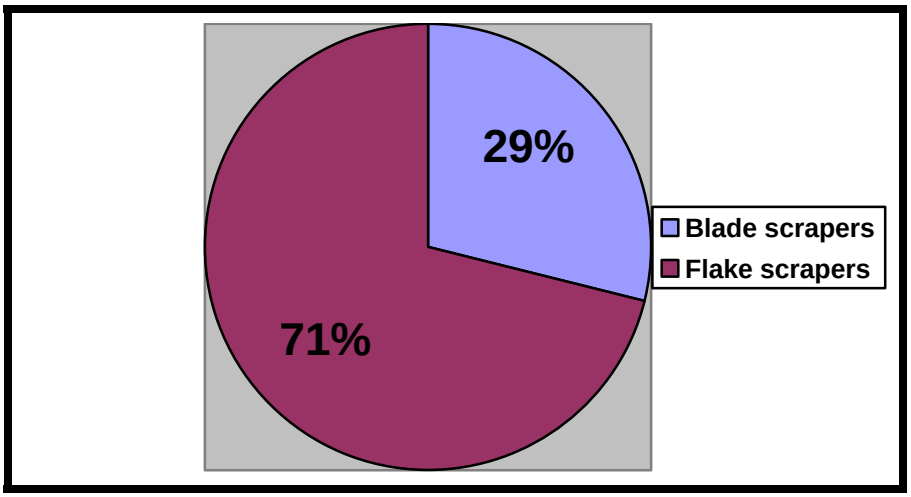


Figure 6.8: Classification of end-scraper blanks.

The "active" part of the scrapers was obviously the scraper-head, which was exclusively used in transverse actions (scraping). Functional evidence shows that 90% of the scrapers were used to scrape hide and that they were mostly hafted. Refitting sequences make clear that the Rekem scrapers were frequently abandoned before complete exhaustion. Their abandonment often took place in or near the area where they had been made, used and resharpened. But this case is not as clear as with burins. At least 7 scrapers are shown to have been produced outside their locus of discard. Scraper manufacture involves a rather simple procedure of unifacial flaking. As opposed to burins, scrapers are basically a stable type of tool. They may reduce in length, but they otherwise represent the same type throughout their use-lives (De Bie and Caspar 2000: 187-193).

6.5.2.3 Discussion of tool production

This section dealt with the techno-morphological presentation and analysis of the three major types of retouched tools at Rekem. Information from systematic refitting and functional analyses offers a dynamic approach to retouch technology by tracing and elucidating the successive steps of tool manufacture. At Rekem, it is safe to say that tool manufacture on the whole is unstandardised.

The production of LMP appears to be an essentially continuous process, from intentional shape to quick discard, without the interference of intermittent resharpening episodes. By contrast, burins were constantly retooled and as a result their life-cycles were quite extensive. So much so, that refits reveal burins to have transformed to different tools or even tool types during their use and reuse. The nature of the production of scrapers is similarly dynamic, albeit to a lesser degree. In other words, rejuvenation does occur when necessary but it does not alter the tool class. The most obvious difference between burins and scrapers is the expedient character of the former. Burins are never kept for future use. They are used on the spot they are made and they are discarded very quickly even if they are still potentially efficient. Conversely, scrapers are more curated than burins although their intra-site distribution and mobility never reaches that of LMP.

6.6 IMPLICATIONS FOR PERSONHOOD AT REKEM

As already stated in chapter 4, the analytic framework selected from the onset of this work is that of social practice; within it, lithic technological studies are refreshingly discussed in a context of social meaning of variability. Technology is understood to be not so much a matter of things, but of projects in which the technical and the social are very difficult to distinguish. In a vein similar to the one adopted for the interpretation for the lithics of Hengistbury Head, I will argue that technological production and artefact use are always socially situated. In addition to economic needs and functionality, material expressions, like stone tools, are part of the hybrid relations that develop

between humans and things at given places. As such, they contribute to the active negotiations that are part of the fabric of contextual human personhood.

At the site of Rekem, the general overview of the blank production exhibits beyond doubt that throughout the entire flint reduction process knappers adopted a very flexible operational schema. A generalised lack of consistency spans the whole chaîne: from the variability of raw material selection in terms of size and quality, to the simplified laminar production both qualitatively and quantitavely (no careful preparation and maintenance, variation in productivity), to the lack of systematic use of blanks (i.e. little clear distinction between the selection of blades and flakes for use). The low degree of standardisation is equally witnessed in the formal tool categories. Before anything else, I should point out that hunter-gatherers at Rekem cannot be really expected to share our present day standards for imposed forms and consistency. Also, behind their any given selection of particular forms and shapes there must have existed not only the need to fulfil functional and practical considerations but also to meet social demands.

By placing the lack of technological standardisation in a relational context, the extreme variation in terms of correlation of core volume and core reduction highlights the fact that the social action of consumption at Rekem is not constant. On the contrary, this material connection between people (knappers) and objects (cores and removals) is fluctuating, some times even erratic, especially when comparing totally exhausted cores to "many reduction sequences that failed to produce any blade" (De Bie and Caspar 2000: 107).

This non-systematic productivity results in equally versatile amounts of lithic artefacts: some cores give many artefacts and some much less. The equivalent social action for the technological flint removals is fragmentation. Once again, the embodied and habitual breaking up and distributing of débitage products is performed in a versatile context.

It is conceivable that the inconsistent flint procurement is mirroring the social practice of accumulation, which at Rekem is of a flexible nature. Hunter-gatherers accumulate flint nodules in a non-systematic way; it follows then that the relations they construct while interacting with persons (themselves and others) and things (nodules) in a place (their area of immediate vicinity) are similarly flexible. This adaptability

mobilises personhood creation and manifestation. One final point concerns the previous reference to the tentative proposition that the average blank production per core could be 50 items. This roughly agrees with the information from Table 6.3: about 200 cores (N = 215) seem to have produced some 10,000 artefacts (N of débitage products excluding the chips = 9,005) (De Bie and Caspar 2000:107). In other words, we have two kinds of accumulations following opposite directions: the 200 cores were accumulated "inwards" (brought in at Rekem); reversely, their 10,000 products were accumulated "outwards" (débitage "brought out" of the core).

At Rekem, the direct access to the Lateglacial river terraces and the absence of imported materials either in the form of nodules or of finished artefacts allow us to infer that extended socio-technical networks of exchange were not of pressing necessity. Even in the case of the non-flint rocks, used as big tools or structural elements and none of which occur naturally on the surface of the site, there is little doubt that they could be collected locally. However, what is lost in distance is gained in intensity. Refits clearly show that objects are moving in the campsite both between and within concentrations. I have already mentioned the inter- and intra- locus mobility with reference to non-flint rocks and to LMP and scrapers (Table 6.8). It follows naturally that objects (undoubtedly exactly like people) are in a constant move and re-distribution. Consequently, objects and people form networks of enchainment while on the move. The enchainment at Rekem need not be expansive in terms of mileage, or even external to the physical boundaries of the site. On the contrary, it succeeds in creating the relational triad of people-object-place within the spatial delineation of the settlement.

	LMP	**Burins**	**Scrapers**
Dynamic nature (use-resharpening-reuse)	No	Yes	Yes
Expediency *(intra-site distribution)*	No *(high mobility)*	Yes	No *(low mobility)*
Pre-conceived forms	Yes	No	Yes
Standardisation	No	No	No

Table 6.8: Synopsis of tool production at Rekem

I have argued elsewhere (chapter 4) that the dynamic concept of the chaîne opératoire becomes much more meaningful when it integrates its technical results into a social context. In the case of Rekem, the excellent refitting work that has taken place allows the detection of patterns in the biographies of tools that would have been otherwise lost. This is an excellent result in its own right. For example, the optimal reconstruction of the use life of burins at Rekem reveals their particularly expedient character. This means that they are made, used, modified and abandoned at the same spot; they can thus reliably indicate the areas dedicated to burin-related activities. But what is even more interesting than the exhibited typological variability of various tool classes is the assertion that tools' life histories are indicative of tools' associations with people. Regarding the Rekem burins again, it seems to me that their materiality does not necessarily succeed the process of physical transformation that they undergo (preconceived form that precedes technical knowledge and knapping techniques). It is rather imbued with the meaning of a process of becoming. As a consequence, the burins are once again the successive steps of a process (much like a chaîne) but this time every part is informed by the knowledge of the complete process. In other words, the life trajectory of the burins (as in any tool type) is made up by a succession of individual histories. In each one of them, the materiality of the flint becomes/ is the form.

As stipulated above, deliberate blank selection is not very rigidly exercised at Rekem. Tool types are invariably made on diverse blanks including technical pieces. Even the somehow more standardised backed pieces do not follow very strict blank selection criteria. There were definitely pre-planned schemata concerning what needs to be knapped but the way to the desired result was more often than not flexible, versatile and adaptable. The lack of standardisation in the Rekem lithics can be approached in two ways. The first views flint knapping and its end results as a process whereby objects are created as the required response to a need. I believe that this view makes a good example of what I identified as a problematic aspect of the airtight use of the "assemblage" as the only unit of reference (chapter 4.2.1). Within this paradigm, variability can only result from pre-conceived and discrete procedural concepts, which are in turn universally applied. On the other hand, the second approach to variability emphasises its

idiosyncratic character and stylistic potential. I note here that idiosyncrasy does not equal a cultural marker. On the contrary, it opens the possibility for an "individual" enriched unit of explanation. In such a context, variability resides in the previous level down from the assemblage and it spreads upwards. To conclude that at Rekem the flexible chaîne lies in individual choices does not mean that it boils down to personal decisions of actual individual knappers (though such a possibility is not excluded). Rather it is the generic individual, the one that informs and is informed by the group, that constructs the fluctuating character of the technology. In other words, the Federmesser hunter-gatherers of Rekem materialised a fluid and adaptable technology through their embodied, social and habitual choices and preferences, which are definitely informed but in no way restricted from the technological and the functional.

To round off the discussion about social actions and practices, I will turn to the idea that in a spatially differentiated site, like Rekem, human identity may be also spatially dependent. In short, the site is organised into more or less distinctive activity localities (Fig. 6.3 and Table 6.2). Large domestic areas with possible hearths and even structures (Rekem 5, 10 and to a lesser degree Rekem 6 and 12) focus on tool repair. At the same time, smaller knapping spots (Rekem 7, 11, 13, 15, 16) are specialised localities for the manufacture of artefacts. It is logical to assume that if we transcribe the terms of lithic technology (repair and manufacture) into the equivalent socially informed ones (consumption and fragmentation), we will end up with a clear spatial mapping. Nonetheless, this is more than a semantic exercise. The difference between consumption and retooling (as is between production and fragmentation) lies in the inherent social attention of the former. The notion of consumption is essentially the embodied, habitual and agentive action of "using up". As such, it is more relational than technical.

	REKEM 10	**REKEM 7**
Place	domestic area	specialised area
Activities	multiple	knapping
Lithic action	retooling	backing
Metaphorical Place	**personhood creation through embodiment**	
Social action	consumption	fragmentation
Social practice	accumulation	enchainment

Table 6.9: Personhood at different loci at Rekem.

Living areas and knapping spots at Rekem are spaces, in the physical, geographical sense of the word. Their suggested inclusive role in personhood creation could benefit from ideas developed within the disciplinary discourses of geography and architecture. These ideas, authentically phenomenological, originally emerged from discussions about the built environment and planning (Thomas 2006 and references therein). I feel however that it is possible for these notions to be applied to non-built prehistoric geographies as well. The Cartesian conception of space, in which the relationships between objects could be discussed in purely quantitative and geometrical terms, appears to evict human beings from their lived world, repositioning them instead as its viewers and interpreters (Thomas 2006: 48). Within this paradigm, the various loci at Rekem exist independently of people, as if the latter are added to them. An alternative perception focuses on the phenomenon of *place,* which is "not simply a region of space, but is experienced by people as having culturally specific meaning" (Thomas 2006: 49). Human embodied experience is inseparable from the knowledge of space and space transforms human interaction with the world. This time, the Rekem areas are places rendered meaningful through human presence. The loci become alive by the people who exist in and interact with them and simultaneously they shape these very people. As much as this approach focuses on people and their condition, experience, awareness and knowledge it still runs the risk of reproducing the Cartesian framework of an intrinsic passive and lifeless world subsequently activated by human intervention. The problem is overcome by abandoning the sequencing (coming second) and humanity of spatial meaningfulness. This means that the geometrical space of geography "is not a given, but is itself a sophisticated cultural construction. There is no founding knowledge of space that is meaning-free, and to which meaning is added. On the contrary, people discover their world in the process of understanding it" (Thomas 2006: 49, citing Tuan 1974). Essential in this spatial significance of the world is the presence of the human body. The embodied experience refutes a spatial order imposed from above and promotes one that happens from people's everyday involvement in the world. Under this light, Habitation Zone 1 and its constitutive areas become relational lived places which refine and are refined by human beings.

To further the argument that places create persons, or rather that places and persons are co-created in direct relationship to each other, I will suggest that this process is facilitated by assigning metaphorical values to physical places. Metaphor theory is based on the premise that one thing or domain can be understood and experienced in terms of another. Metaphorical thinking entails the conceptualisation of complex and abstract elements of the world using the properties of more concrete realms of experience (Lakoff and Johnson 1980; Tilley 1999). The metaphors that provide the basis for an interpretative understanding of the world are not random and irrelevant; they are associated with non-metaphorical structures that arise from everyday bodily experiences and routine acts (Lakoff and Johnson 1980; Gamble 2007). In other words, the creation of metaphorical structures is not a mental process separated from the body. On the contrary, it involves the "second nature" of the embodied knowledge of the *habitus.* What is more, the recreation, continuity and durability of perception through metaphors lead to (social) practice (see chapter 3).

Much in the same way as artefacts act as valuable metaphorical projections, so do places (Tilley 1999). Most physical places are conceptualised metaphorically on some level through the embodied array of activities associated with the place (the "taskscape", Ingold 2000). By extension, their meaning stems from the habitual and the familiar and spills to the abstract and the vague. As mentioned above, places are not semantically deprived spatial units, a kind of conceptual *tabula rasa*, to which meaning and significance is added at a second stage. On the contrary, they are meaningfully fashioned from the start. In essence, it is the overlapping physical and metaphorical places on which to perform and embody the distributed phenomenon of personhood, which equally implicates human and non-human entities.

Going back to Rekem, how does spatial and functional differentiation translate to personhood creation? Is there a link between the active construction of space and the social negotiation of being? The answer is yes and lies at the intersection of physical and metaphorical places. Embodied actions and habitual knowledge create Habitation Zone 1, where life, in its biological, ecological, economic and social sense, takes place. At the same time, these exact processes create socially constructed persons. I shall proceed with two specific examples.

We saw before that Rekem 10 (and to a lesser extent Rekem 5) is a rather large locus with possible hearth(s) and a possible dwelling structure. In terms of lithic density, it has fewer artefacts than the smaller débitage scatters at Rekem 7 and 11 but it exhibits an almost twice as high proportion of finished tools (N=122). The tools are dominated by burins (N=47) and, almost exclusively slender, LMP (N=40). In and around the supposed dwelling a multitude of activities are thought to have taken place, including maintenance of hunting gear, butchering and food processing, hide working and antler/ bone working (De Bie and Caspar 2000: 232-237). For these reasons, Rekem 10 has been labelled a "domestic area" and the prevailing lithic technological action has been recognised as "retooling", mainly of replacing broken arrow heads with new projectile LMP. More important for the purposes of this discussion is the way Rekem 10 facilitates the emergence of human personhood: through the bodies and conscious and/ or unconscious knowledge of people, Rekem 10 becomes the metaphorical extension of the human person. The taskscape involved in a domestic area (constructing a "built" environment, cleaning and maintaining it and all the activities happening there like knapping etc) renders Rekem 10 the platform for consumption (in the sense of the short-term process of using up) and accumulation (in the sense of bringing together, producing and reproducing the resources of social life) to inform human personhood (Table 6.9).

Conversely, Rekem 7 (and Rekem 11) paints a different picture. It is a lithic scatter of around 2000 artefacts including 55 retouched tools. Two thirds of these tools (N=39) are either slender or large LMP. The predominance of a major tool category points at a clear specialisation at Rekem 7 (together with Rekem 11): namely the fabrication of LMP (Caspar and De Bie 1996). Quite impressively, the highly specialised knapping spot at Rekem 7 is not disconnected from the larger settlement. Refitting studies showed that at least two of the burins associated with a series of LMP in the reduction of one flint type were exported, and eventually abandoned at Rekem 1. Additionally, a backed point and two unretouched blades, from other sequences, were physically connected to Rekem 1. (De Bie and Caspar 2000: 229). At the specialised area of Rekem 7, the *habitus* of modifying flint into backed blades evokes the metaphorical referent of fragmentation while the taskscape of building inter-locus relations mobilises the metaphor of enchainment. Much like the chaîne opératoire itself

(complete production of specific tool types), the practice at Rekem 7 is a longer-term and more collective process of a circulated and distributed personhood (Table 6.9).

In conclusion, the process of being a hunter-gatherer at Rekem during the Alleröd was not constant. The development and establishment of personal identities at Rekem included a multitude of connections that co-implicated the human and non-human, the metaphorical and non-metaphorical domains (Fig. 6.9).

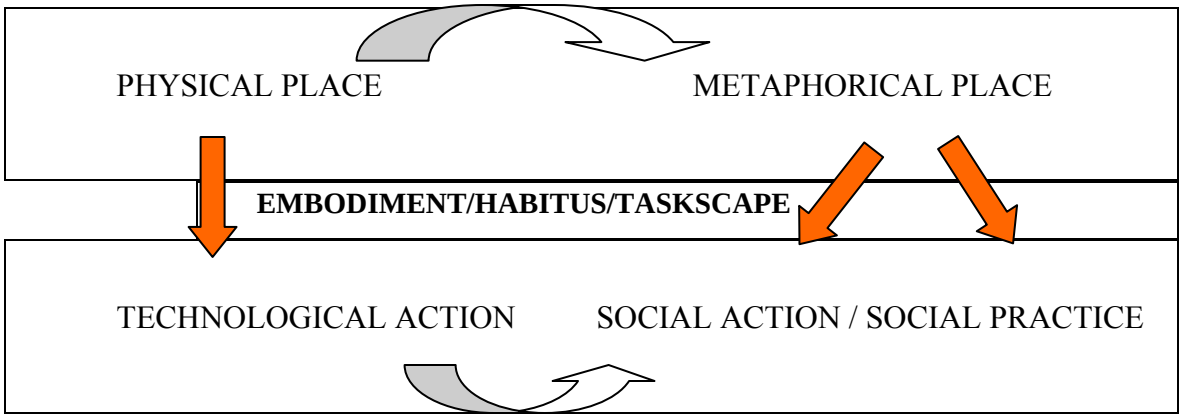


Figure 6.9: Schematisation of personhood creation at Rekem

6.7 SUMMARY

During the deglaciation, the newly available for reoccupation northern Europe witnessed a socioeconomic system quite different from the preceding Magdalenian. This time around increased mobility, greater variability in on-site activities and a less structured use of the landscape were involved. It seems safe to argue that such shifts in settlement, economic and territorial organisation can be a direct result of the social mechanisms and communication patterns people devised and applied in order to survive fluctuating climates, unknown territories, changing food resources and demographic pressures. These mechanisms underpin the social frameworks employed for the everyday "struggle for survival" and can mirror the identities of Lateglacial hunter-gatherers. At Rekem, in the absence of any other kind of remains, it is the lithics that corroborate this

idea of loosened rigidity and greater versatility. Simultaneously, it is the lithics that instigate and ensure a chain of interactions between the technical and the social, the individual and the collective.

The last chapter is in essence a vehicle for bringing together everything that has been discussed so far. It recapitulates the core aims of this research by placing them in a wider unified context. This is done in two steps. Firstly, the conclusions drawn from the two case studies are discussed in parallel so that common or diverging aspects of personhood creation through material culture can be highlighted. Secondly, the picture opens to incorporate a similar discussion of Lateglacial Rhineland.

CHAPTER SEVEN

The Final Upper Palaeolithic personhood in northwestern Europe: discussion and conclusions

7.1 RESTATEMENT OF RESEARCH AIMS

I will begin this chapter by reiterating that the principal aim of my research is to investigate aspects of Lateglacial human personhood that are intricately bound to material culture. More specifically, the purpose of this work is to explore what the observed variability in the lithic record can reveal about past social processes like personhood formation. So far, the discussion within this framework of Hengistbury Head and Rekem has realised the stated objectives. The archaeological record was regarded as a window to the interplay between the material and the immaterial; as a way to decipher the nature of human social engagement with their fellow humans and their own selves; as a process of articulating immaterial and abstract concepts through the material world.

The same scope will be taken in the present chapter but the focus will be geographically and chronologically broader. The idea is to discuss emerging human identities against a more regional background, which spans both sub-stages of the Lateglacial. As for the material data, stone tools are always at the forefront but this time the emphasis is less on the socio-technical aspect of the chaîne opératoire (cf. chapters 5 and 6) and more on the activities of raw material procurement and distribution, which are also viewed as social *practice* (see chapter 1) and they imply social organisation.

7.2 THE BIG PICTURE

In chapter four, where the methodology of the thesis was outlined, I stated my intention to incorporate both the micro- and the macro-scale of reference in my account of aspects of Lateglacial social life. The micro-scale of the site is the appropriate unit of

analysis when it comes to considering the nature and implications of interpersonal dynamics of past social agents. This is what was achieved in the previous site-oriented chapters, where it was demonstrated how people may have conducted their personal identity through material culture. The studies of Hengistbury Head (chapter 5) and Rekem (chapter 6) reconfigured human identity at the level of the individual person, primarily via lithic technology and secondarily through spatial organisation. But in order to reach conclusions about Lateglacial hunter-gatherer social life and organisation, we need to extrapolate these results to larger areas. To incorporate more sites that are culturally and temporally comparable while geographically more dispersed is the logical step to take, once we accept that Hengistbury Head and Rekem can only exist and function within larger settlement systems. The region of Central Rhineland with its cluster of open-air sites offers good prospects for studying Lateglacial lithic use, mobility, hunting strategies and social organisation. Such inclusion is useful in its provision of both multi-sited and multi-regional discussions, which are a balanced way of approaching and understanding activities and behaviours that are differentiated in time and space.

Bearing these points in mind, the present chapter revisits the familiar topics of the thesis but at a different geographical scale. The macro-analytic model of explanation, the unit of the region, is a familiar viewpoint within Palaeolithic archaeology (Binford 1980; Rensink 2000; Gamble 1986: 15-16). It is often used in studies of subsistence practices, environmental adaptations and resource procurement patterns. Here, the region will be regarded as a dynamic system of geographically and temporally connected sites representing regional settlement histories and involving mobile groups that are engaged in self-defining social practices and processes. The region will be the canvas against which people led an existence, while ceaselessly moving across the landscape and engaging in actions that constituted social relations and identities. The aim here will be to explore aspects of personal identity formation while focusing on the Middle Rhine area. The region lies to the south of the town of Cologne and because of its number of Late and Final Upper Palaeolithic sites and their exceptional preservation it is one of the most significant regions for Palaeolithic research in western Europe (Bosinski 1995). The sites of the region will be discussed in order to provide an interpretative framework

for the social life in the Lateglacial. The evidence from tool manufacture, use and distribution alongside raw material procurement, mobility, spatial analysis, technical strategies and landscape use will aim to increase our understanding of past human experience in the region and to offer new insights into models of social living. The literature offers information about various sites of similar age in central Germany. Knowledge about past landscapes, climate, fauna, flora, stratigraphy and elements of material culture can be used to detect social interactions and possible ways these reflected back to the creation and experiencing of identities.

Furthermore, collectively viewed, the sites studied here and originally selected as representative of the northern European Lateglacial, may inform us on issues of landscape use, including aspects of site distribution, mobility and territory exploitation patterns. It seems safe to argue that when the terrain of northern Europe was once again available for occupation after the Last Glacial Maximum various sites were created by different types of activities. Information derived from the surviving lithics, spatial organisation and faunal remains suggests that certain assemblages were the result of hunting and initial butchery of the prey, whereas in other sites consumption and processing-oriented activities were taking place.

In northwestern Europe, Late Upper Palaeolithic (i.e. Final Magdalenian) technologies are traditionally characterised by a standardised lithic production, the use of exotic raw material and a logistical settlement system. By contrast, the succeeding Final Upper Palaeolithic (i.e. Federmesser or Azilian in the literature) is generally restricted to the use of local raw materials of poorer quality, an expedient and less regularised lithic technology and smaller and apparently short-lived settlements (Barton and Roberts 1996; Fagnart 1997). The changes in mobility, as reflected in raw material procurement, and in the operational strategies employed in stone tool manufacture are often attributed to the wider changes in the Lateglacial climate and landscape (for example, the increasing growth of woodlands, especially during the second part of the interglacial, would have affected patterns of movement as well as the exploitation of different animals which would also reflect on the settlement systems). In the British context, such changes are also thought to be the result of an increasing population which has access to analogously decreasing group territories (Barton and Roberts 1996). Nevertheless, recent

work suggests that more complex and varied technological and economic choices were in operation in Germany at around this time with certain raw materials, alongside the locally available ones, being transported from distances nearing the 100 km (Floss 1991). Evidence from animal exploitation also points to variability most possibly attributed to seasonality: more homogeneous lithic and faunal spectra indicate winter activities, whereas more diverse lithics and fauna are associated with summer activities (Street 1997).

It is here proposed that during the deglaciation we witness a settlement system which involved increased mobility, greater variability in on-site activities coupled with a less structured and patterned use of the landscape. This kind of settlement patterns can be a direct result of the possible social mechanisms people devised and applied in order to survive fluctuating climates, changing food resources and demographic pressures. These strategies (social actions and practices) mirror the identities of Lateglacial hunter-gatherers and can promote our fathoming of the social frameworks underpinning the everyday "struggle for survival".

The following sections will offer detailed descriptions of the Lateglacial sites and their archaeology (7.3, 7.4 and 7.6) and they will culminate in a discussion touching upon issues of the materialisation of personhood (7.5 and 7.7). The final sections of the thesis will overview the general conclusions of the research undertaken (7.8) and will pinpoint potential avenues for further investigations (7.9).

7.3 LATEGLACIAL SITES IN CENTRAL RHINELAND

The western part of Germany is dominated by the presence of the Rhine. The River begins in the Swiss Alps (the Rheinwaldhorn Glacier) and flows north and east approximately 820 miles (1,320 km), thus connecting the Alps to the North Sea. It passes through or borders with Liechtenstein, Austria, Germany, France, the Netherlands and Switzerland. Any research into the Palaeolithic and Mesolithic in the area should take into consideration the fact that the Rhineland has always acted as an axis of movement and a natural communication route between north and south. The sites

examined here are situated in Central Rhineland (Middle Rhine). Two of them, namely Gönnersdorf and Andernach-Martinsberg, are of principal importance to the present discussion due to their size and richness. Four more sites (namely Niederbieber, Kettig, Urbar and Bad Breisig) will be discussed and used as a means of providing additional insights to the issues raised where needed. Regarded collectively, they are all in close geographical connection to the river and span the whole spectrum of the Lateglacial interstadial complex (GI-1e to GI-1a), from approximately 15,500 to 12,800 cal BP.

In the centre of the Middle Rhine region, where the river meets its two main tributaries the Moselle and the Lahn, is the volcanic field of the Neuwied Basin where five important sites lie within a distance of a few kilometres from each other (fig 7.1). **Gönnersdorf** and the lower horizons of **Andernach-Martinsberg** contain important information about the occupation during the first warm interstadial (the traditional Bölling or the GI-1e of the GRIP ice-core events). The lithic industries culturally correspond to the Shouldered Point Assemblages (or the Hamburgian culture) of the northern plain. More often than not however they are mentioned as "Magdalenian" in the relevant literature, in direct analogy to the French scheme. The upper layers of **Andernach-Martisnberg**, (along with the sites of **Niederbieber**, **Kettig**, **Urbar and Bad Breisig**[15]) represent the well-documented occupational episode of the second warm interstadial of the "Alleröd" or GI-1c to GI-1a, which in Germany is referred under the broad term of *Federmessegruppen*. The term generally applies to Lateglacial technocomplexes with curved-backed points. In many instances the same assemblages are also called Arched-Backed Pieces (ABP), while in south-western Europe the term Azilian is often used for similar industries (Bosinksi 1995; Baales and Jöris 2002).

The Middle Rhine region (fig. 7.1) is bounded by the Taunus and Hunsrück in the south and by the Eifel and the Westerwald in the north. In the heart of this Tertiary old slate massif formation lies the Neuwied basin, a zone of high tectonic activity. The last violent eruption in the area is that of the Laacher See volcano. Research carried out in Mertloch, some 15 km south of the Laacher See, shows the succession of volcanic

[15] The site of Boppard (Fig. 7.1) also belongs to the Federmesser group of sites but does not form part of this work for reasons explained in section 7.6.

episodes, which unfolded in the course of just a few days. Dating of the event was achieved by a series of radiocarbon determinations collected from the Laacher See region and the most precise timing has a weighed mean value of 11,062 ± 11 ^{14}C years BP. Correlation of the eruption with the Greenland ice cores signal for a volcanic event securely places it some 200 years before the onset of the Younger Dryas (GS-1) stadial (Baales et al. 2002). The Alleröd- Younger Dryas boundary has been a matter of contention (Jöris and Weninger 2000), but relatively recent consensus accepts a date of *circa* 12,760 cal BP for the transition, thus calendrically locating the Laacher See episode at 12,960 cal BP (Baales 2006; Street et al. 2006; Baales and Jöris 2002). This date is not that much far off from the original suggested correction (12,916 cal BP) for the Laacher See mean ^{14}C determination, which was still locked in a 200 year precedence of the Alleröd ending (placed at 12,713 cal BP) (Baales et al. 2002). In any case, the eruption covered an extensive area with pumice and ash establishing therefore a *terminus ante quem* for the underlying deposits. The volcanic tephra sealed the land surface of the Alleröd interstadial and preserved a wealth of information about the archaeology and the palaeoecology of the area.

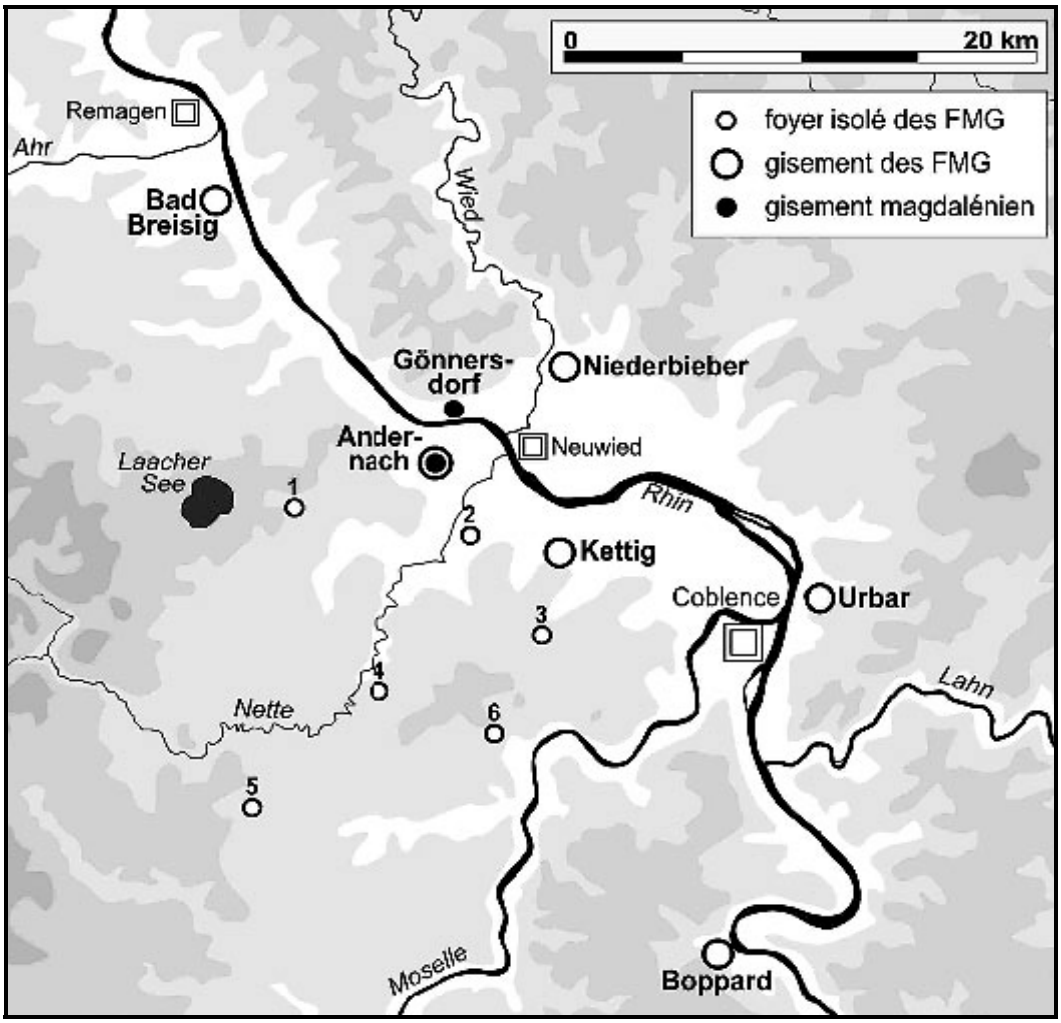


Figure 7.1: The Central Rhineland and the Neuwied Basin with major Lateglacial sites: The black circles refer to the two sites of the first part of the interstadial (GI- 1e, Bölling), namely Gönnersdorf and Andernach. The latter also exhibits a subsequent occupation phase. The open circles indicate the sites corresponding to the second part of the interstadial: Andernach, Niederbieber, Urbar, Kettig, Bad Breisig and Boppard. The smaller circles stand for isolated hearth finds/ important palaeontological sites below the pumice of the Laacher See volcano (Street et al. 2006: 754).

7.3.1 Chronology and radiocarbon dating in Central Rhineland

Previously published conventional radiocarbon dates on bulked bone and mollusc shell seemed to indicate that the earliest Magdalenian occupation at Gönnersdorf was placed around 12,500 ^{14}C BP[16], while the earliest occupation at Andernach may have

[16]The most commonly quoted dates for the site are the Lyon samples Ly-768: 12380 ±230 and Ly-1172: 12660 ±370

been more than 500 radiocarbon years earlier. Recently, a new program of AMS radiocarbon dating was conducted with the aim of improving understanding of the chronological history of the two sites. The AMS determinations revise this impression and suggest that the onset of occupation for both sites was in fact simultaneous and prior to the warming of the Greenland Interstadial GI 1e.

Following the rediscovery and excavation of Andernach in the 80s, AMS results suggested that the Magdalenian occupation was appreciably older than indicated by the (quite heterogeneous) previous data series and pollen analysis from Gönnersdorf and also confirmed a much younger Federmessergruppen presence for the site (Street 1997; Street 1998). Calibrated, the AMS results from both sites, showed that the Magdalenian occupation of the Rhineland lies before 15,000 calendar years BP and thus pre-dated the Lateglacial warming observed in the Greenland ice cores at around 14,500 ice core years (Street 1997: 547; for chronological correlations see Table 1.2). This conclusion comes in contrast to the previously assigned "late Bölling" date for the occupation at Gönnersdorf. Later AMS measurements of three Gönnersdorf samples taken from pits (OxA-5728, OxA-5729 and OxA-5730) gave dates in agreement with the Andernach results (Hedges et al. 1998) and confirmed the pre-interstadial status of the Magdalenian in Central Rhineland. Further dates have since been obtained for both sites (Higham et al. 2007).

A number of discrepant results from Gönnersdorf show that the history of the site is more complicated. There seems to be a chronological hiatus between the main Magdalenian faunal assemblage and mega-faunal remains: two AMS indications on a mammoth bone and task fragment (Ox-A 10239 and Ox-A 10199) are much older than the rest and are therefore to be interpreted as collected sub-fossil material (Stuart et al. 2002). By contrast, a bone of elk (Ox-A 15296) is many hundreds of ^{14}C years younger than the other hunted fauna (Street 2007). Due to its association with a more temperate fauna and a small number of backed points, it may indicate a younger occupation for Gönnersdorf and thus bridging the gap between the two phases of the Interstadial (Street 2000).

GÖNNERSDORF					
Lab-Nr	**Datum**	**Species**	**Calibration** (CalPal online)	**Comment**	**Reference**
OxA- 10239	14380 ± 100	Mammoth	17536 ± 259	Predates Occupation	1
OxA- 10199	14570 ± 90	Mammoth	17798 ± 308	Predates Occupation	1
OxA- 5730	12790 ± 120	Equus	14941 ± 357	Concentration I	2
OxA- 5729	12910 ± 130	Equus	15130 ± 288	Concentration I	2
OxA- 5728	12730 ± 130	Equus	14860 ± 375	Concentration I	2
OxA- 15295	13060 ± 60	Reindeer	15953 ± 391	Concentration III	3
OxA- 15296	12385 ± 65	Elk	14597 ± 340	In southwestern part, Away from dwellings. Younger occupation?	3

Table 7.1: Recent AMS dates for Gönnersdorf. References used: 1=Stuart et al. 2002; 2=Hedges et al. 1998: 231 (OxA datelist 25); 3=Higham et al. 2007: 16-17 (OxA datelist 32)

At Andernach-Martinsberg there is a clear chronological hiatus between the Magdalenian and the subsequent Federmessergruppen activities at the site. For the former, the bulk of the methodologically acceptable results gives a pooled value of 12980 ± 60 BP (15820 ± 404 cal BP) (Hedges et al. 1987: 294). For the younger horizon, the combined value (excluding OxA-998 that may suggest a later activity) of 12010 ± 110 BP (14014 ± 249 cal BP) is quite early for the context but still consistent with having been deposited prior to the Laacher See eruption (Street 1998: 54). It is now believed that the majority of this material represents one longer occupation rather than a discrete series of separate occupations (Hedges et al. 1987: 293). Finally, a bone (OxA 985: 12300 ± 200) with a different (atypical) preservation to the Magdalenian specimens gave an intermediate radiocarbon date of around 14,400 cal BP, perhaps suggesting ephemeral human visits to the site between these well demonstrated phases. This result appears to be of broadly the same age as the Gönnersdorf elk and may be therefore suggestive of a contemporaneous human presence in both sites.

		ANDERNACH		MAGDALENIAN	
Lab-Nr	**Datum**	**Species**	**Calibration** (CalPal online)	**Comment**	**Reference**
OxA-10651	13270 ± 180	Equus	16200 ± 417	May belong to younger occupation of Koblentz-Metternich	4
OxA-10493	13185 ± 80	Equus	16114 ± 401	May belong to younger occupation of Koblentz-Metternich	4
OxA-10492	13025 ± 50	Equus	16200 ± 417	May belong to younger occupation of Koblentz-Metternich	4
OxA-1130	12950 ± 140	Equus	15769 ± 472	Concentration III	5
OxA-1129	13090 ± 130	Equus	16000 ± 429	Concentration II	5
OxA-1128	13200 ± 140	Equus	16130 ± 433	Concentration II	5
OxA-1127	12820 ± 130	Equus	15381 ± 400	Concentration II	5
OxA-1126	12890 ± 140	Equus	15628 ± 482	Concentration I	5
OxA-1125	12930 ± 180	Equus	15726 ± 180	Concentration I	5

Table 7.2: AMS dates for the lower (Magdalenian) layers at Andernach. References used: 4=Bronk-Ramsey et al. 2002: 29 (OxA datelist 31); 5=Hedges et al. 1987: 293-4 (OxA datelist 6).

In contrast to the early date of the Andernach assemblage that places it at the beginning of the second inderstadial, the general consensus for three of the other Federmesser sites under consideration here (Niederbieber, Kettig, Urbar) is that they chronologically fall into the middle and later part of the Alleröd (Baales and Street 1996: 289), while predating the Laacher See eruption. More specifically, Kettig gives a single conventional radiocarbon date on bulked red deer bone of 11314 ± 50 (Hd-18123 in Baales 2001: 128). Comparably, Urbar has a single AMS date of 11350 ± 120 (OxA-1137 in Baales and Street 1996: 289). The dates from Niederbieber are more problematic. At least five of them (OxA 1132-1136) are deemed erroneously too young on methodological reasons (conservation and/ or low collagen). However, the AMS date OxA-2066: 11110 ± 110 was used as a control for them and its result is considered methodologically acceptable (Street et al. 1994: 7). Finally, the dating of the site of Bad Breisig corresponds with its stratigraphic position above the Laacher See tephra. Of the three available radiocarbon determinations, two (GrA-17642 and GrA-17716) are deemed too young on accounts of bioturbation (charred hardwood) and erroneous conservation (burnt bone). The only acceptable date is GrA-17493: 10840 ± 60 (on pine), which when calibrated (12816 ± 84 cal BP) becomes the only example of human occupation in the Neuwied postdating the eruption of the Laacher See volcano (12960 cal BP) (Baales and Jöris 2002).

	ANDERNACH			FEDERMESSER	
Lab-Nr	**Datum**	**Species**	**Calibration** (CalPal online)	**Comment**	**Reference**
OxA- 1924	11890 ± 120	Cervus	13825 ± 198		6
OxA- 984	11950 ± 250	Cervus	14017 ± 397	In possible hearth in main concentration	5
OxA- 997	11800 ± 160	Cervus	13714 ± 223	In sondage south to the main concentration	5
OxA- 998	11370 ± 160	Bos	13281 ± 189	South to the main concentration. Younger activity	5
OxA- 985	12300 ± 200	Chamois? (Horse?)	14489 ± 442	In hearth. Intermediate activity (?)	5

Table 7.3: AMS dates for upper (Federmesser) layers at Andernach. References used: 5=Hedges et al. 1987: 293-4 (Oxa datelist 6); 6=Street et al. 1994:6.

7.4 OCCUPATION DURING THE GI-1E (BÖLLING)

The Lateglacial open-air sites of Gönnersdorf and Andernach-Martinsberg in the German Central Rhineland are well known for their Late Upper Palaeolithic (Magdalenian) occupation and activities. The latter site also produced evidence for a younger, Final Palaeolithic (Federmesser) occupation. Both sites are particularly well preserved, largely due to their burial beneath the volcanic deposits of the Lateglacial Laacher See eruption at the end of the Alleröd (~12960 cal BP). The two of them are commonly regarded in the literature as sister sites.

The composition of the Magdalenian assemblage and details of the settlement features at the two sites are extremely similar suggesting the occupations are contemporaneous, and possibly representing the activities of the same group(s) of people (Street 1998a). Concentrations of Magdalenian material at both sites represent major dwelling structures, in some cases incorporating paved surfaces and large numbers of pits interpreted as post settings, fireplaces or boiling pits. It is probable that the dwelling structures were inhabited on repeated occasions over the course of several years and were perhaps modified according to need. Large proportions of exogenous lithic raw materials at the sites show that there was contact with distant regions during the

Magdalenian (and the Federmesser). Important among these are the north-west Meuse-Rhine drainage area and the regions up to 200 km to the south-southwest. There is evidence from each of the Magdalenian sites to show human presence during both the "winter" and "summer" halves of the year. Although different dwelling structures were probably occupied at different times, it is unclear whether these occupations were mutually exclusive or involved a period(s) of overlap between them.

At Gönnersdorf and Andernach, in addition to the lithic inventory and the faunal remains, quite a few organic artefacts were found such as bone needles, and antler and ivory projectile points and statuettes. Other findings include ornaments, which can take the form of red haematite, perforated teeth, dentalia and perforated shells from the Mediterranean and perhaps the Atlantic (Fernandez 2001), jet beads and collected fossils. Finally, an important aspect of the archaeology at both Gönnersdorf and Andernach is the abundant artistic expressions. A number of the schist plaques used as building material at both sites is engraved. The depiction of animals (with species such as horse, mammoth and birds being immediately recognisable) is skilful and naturalistic, whereas the depiction of humans is mainly restricted to the female form and is intensely stylised and schematic. Very similar to the engravings are female figurines made on ivory and antler (Street 1997; Street 1998a; Bosinski 1995).

7.4.1 Gönnersdorf

The site of Gönnersdorf is situated on a terrace platform at about 40 m above the present right bank of the Rhine. The settlement structures at Gönnersdorf are very well preserved due to their burial by the pumice of the Laacher See volcano. It is already established that contrary to the initial assignment of the archaeological horizon to the end of the Bölling due to thermophilous elements in the pollen spectrum and conventional radiocarbon dates, more recent Oxford accelerator dates place the occupation almost 500 years earlier. This means that the site was in use at the first rather than at the second half of the interstadial, and probably around 15,000 cal BP.

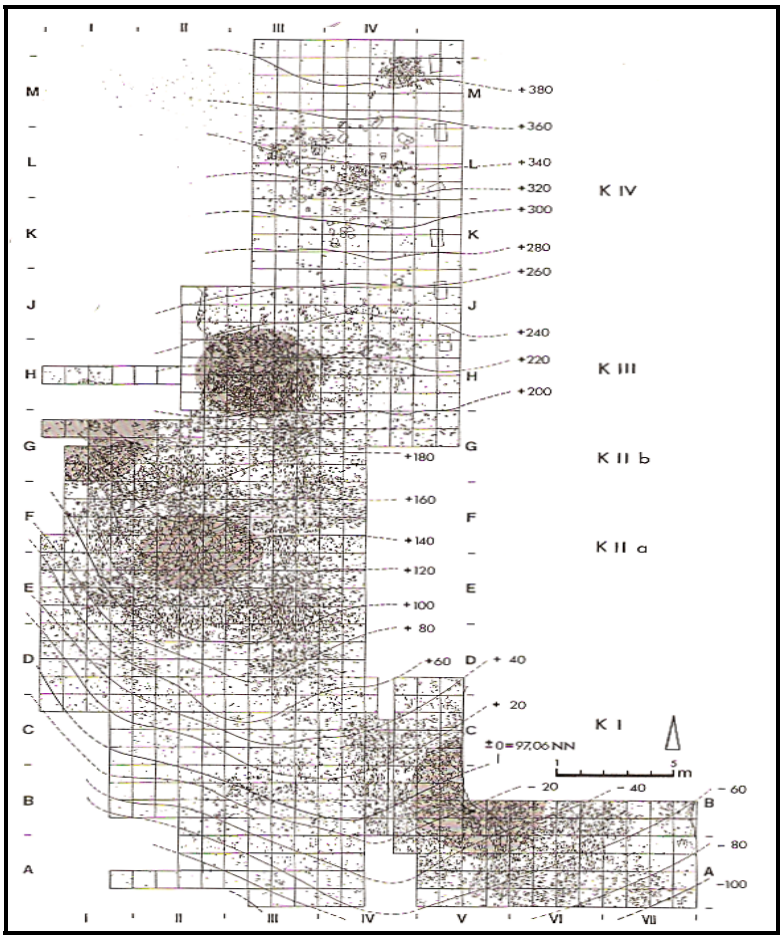


Figure 7.2: Gönnersdorf site plan. Starting from south, KI, KII (a and b), KIII and KIV stand for the well-defined four concentrations (CI-CIV respectively). The first three are recognised as dwelling structures with paved surface and the fourth is a circular arrangement interpreted as a tent ring (picture from Eickhoff 1989: 118).

During excavations from 1968 to 1976, approximately 680m^2 were investigated and in total four concentrations of cultural material were identified. The first three of them, with diameters between 6-8 m, are located in the centre of the site and they exhibit the same settlement pattern. They consist of slabs of schist, quartz and quartzite pebbles, as well as animal bones and stone artefacts. Concentrations I, II and III (from now on referred to as CI, CII and CIII) appear to be the remains of round habitation structures with vertical walls and a conical roof. Their main entrance was placed on the south-eastern side, with another opening on the west. It is believed that these structures were too large to be transportable; rather they could have consisted of a stable framework

which was occupied on repeated occasions over the course of several years. At the centre of CI, in the southeast, a hearth was discovered. Although no intact hearth features were located in CII or CIII, fragments of charcoal and burnt stones suggest their existence. Apart from these relatively large structures several circular stone features were discovered, which have been interpreted as tent rings (Bosinski 1995). A circular arrangement of stones at the north of the excavated area, which is interpreted as a tent ring with an internal hearth, associated with another hearth outside its stone boundary is termed Concentration IV (CIV) (Street 1997, 1998).

Generally speaking, the faunal record of the Neuwied Basin during the first part of the interstadial is quite homogenous. What holds true for Gönnersdorf is also very similar to the lower levels of Andernach. The assemblage at Gönnersdorf is dominated by horse: at CI alone, a minimum of 13 individuals were identified and although the faunal remains of arctic fox are numerically higher (MNI: 30), in terms of meat consumption horse was the most important game. The range of larger mammals is quite wide (Table 7.4) and is in agreement with the typical "mammoth-steppe" fauna of open, continental to arctic conditions (Street 1997; Baales and Street 1996: 288). It is obvious therefore that such assemblages of large herbivores appear to characterise not only the cold and dry stadials with the herbaceous grass vegetation but also the warmer, wetter and more wooded inderstadials. Therefore terms like "mammoth-steppe" may oversimplify the palaeo-environmental and vegetational picture of the Lateglacial in Central Rhineland, which involved a steppe vegetation on the higher terrains and a gallery forest in the Rhine valley (Rensink 1993). The presence of mammoth and woolly rhinos, though weak in the faunal record, is established by the engraved depictions. Species like saiga antelope, pika and arctic hare underline the continentality of the climate. The existence of certain species at Gönnersdorf has been interpreted as reflecting less extreme, interstadial conditions, but recently it was suggested that they might have been hunted during a younger occupation of the site. Particularly, red deer and elk bones are spatially restricted to the southwest of the site, in a zone lying away from the major occupation areas and close to the only lithic curved backed points from the site (Street 1997: 547). This interpretation is corroborated by the young AMS date of the elk (OxA-15296: 12385 ± 65). Although reindeer is of secondary importance

compared to horse, antler of this species is a significant raw material for tools at the site (several types of projectile points and batons have been found in several stages of manufacture). Evidence for active hunting of the game, as opposed to merely collecting the shed antler, comes from quantities of tooth ornaments. At Gönnersdorf the sawed reindeer incisors used as adornment are more than a hundred (similarly, Andernach exhibits 74 of these items) (Fernandez 2001).

At Gönnersdorf (as in Andernach), there is good evidence for seasonality. The development stage of horse foetal bone in CI and CIII, the high number of arctic fox remains (MNI=30, see Table 7.4) and the bones of migrant geese in CI suggest a "winter" occupation, or at least an occupation during the colder half of the year, for the two concentrations. On the contrary, horse foetal bone from CII at a more advanced stage of development and partially fused phalanges of foals indicate that young horses were killed during the summer. Further evidence for a summer occupation of CII is produced by the presence of arctic hare and engravings of birds (Street 1997; Street 1998; Rensink 1995). At Gönnersdorf the exhaustive processing of game is evident, but because spatial patterning and carcass exploitation is better documented and published for Andernach, it will be discussed in the following section.

	Gönnersdorf CI / MNI	Andernach / MNI
Mammoth	1	+
Horse	13	12
Rhinoceros	X (from engravings)	-
Bison	1	-
Saiga antelope	1	-
Chamois	X (in CIV)	-
Red deer	5	2
Reindeer	4	2
Elk	+	-
Wolf	2	-
Arctic fox	30	7
Red fox	2	-
Weasel	-	1
Arctic hare	7	2
Pika	+	1

Table 7.4: Larger mammal fauna from the Neuwied Basin during the first interstadial. (+) and (-) signify presence/ absence. (X) denotes presence of a species in another context. The Gönnersdorf MNI refers to CI only. The Andernach total takes into account animals from the whole site. Data taken and simplified from Street 1997: 548 and Street 1998: 47

The lithic assemblage at Gönnersdorf results from activities associated with the dwelling structures. The Gönnersdorf stone tools (which account for approximately 8.3% of the total stone artefacts, see Table 7.5 and Fig 7.4) are very standardised and are mostly characterised by burins on truncations, dihedral burins, end scrapers, many backed bladelets and small borers (Bosinski 1995).

Gönnersdorf	Lithic Artefacts	Retouched Tools
CI	~11400	1809
CII	~32100	2198
CIII	~1660	893
CIV	621	127
Total	60721	5027

Table 7.5: Comprised information about the Gönnersdorf lithics based on Rensink 1995: 93

The Neuwied Basin is an area poor in good quality flint but other raw materials substitute this shortage. Consequently, a wide range of local rocks were used in addition to a large proportion of material of non-local origin at Gönnersdorf (and at Andernach). Among the useable local materials, siliceous slate (lydite) is present in Rhine deposits, whereas Tertiary quartzite can be collected in the region too (Stapert and Terberger 1989; Rensink 1993). At Gönnersdorf, the spectrum of lithic raw materials, their provenance and their distribution by Concentration create a very interesting picture.

The lithic artefacts at CI are made of Tertiary quartzite, which occurs locally in the Central Rhineland, chalcedony, which originates regionally in the lower part of Central Rhine region, and Baltic erratic flint (or northern European flint), which can be traced more than 100 km to the north in the Saalian glacial till(Bosinski 1995).

At CII, the predominant raw material is Meuse flint (also called western European flint or Kreidefeuerstein), which originates in the Aachen/ Maastricht region, to the northwest of central Rhine. At the same time, a small percentage of artefacts (N=123) from this assemblage is made on Palaeozoic quartzite. Although the Ardennes have been proposed as a possible source of transportation for the latter, its exact location remains unknown yet (Eickhoff 1989: 119-120). Baltic flint is totally absent from CII.

In Concentration III, not only do the different raw materials indicate transportation/ migration patterns but they have been also used to differentiate between possible multiple occupations. The range of raw materials comprises six different kinds. CIII was analysed by the ring-and-sector method that studies frequencies and spatial patterns of artefacts with respect to a central hearth (Stapert 1992). The results indicate at least two, possibly three phases of occupation. In the initial phase, Tertiary quartzite, chalcedony, Baltic flint and brown flint (from the Mainz Basin about 70 km to the southeast) were used and they were probably associated with a tent. In the one or two subsequent phases, Meuse (west European) flint and siliceous slate (lydite) were used in the open air (Stapert and Terberger 1989). If there were indeed superimposed phases of occupation in CIII, the use of lithic raw materials in the initial phase is very similar to that in CI, with the exception of the brown flint imported from the south.

An array of raw materials is utilised at CIV as well. Local and regional Tertiary quartzite, chalcedony and siliceous slate are present, with the last mentioned being the most employed. The exotic materials comprise of a few finds of Palaeozoic quartzite and mainly of artefacts made on Baltic and brown flint.

The exotic lithics are not uniformly distributed among the concentrations but they appear to be associated with some of them. Also, the raw material types show further significant variations in the quantities and the typo-technological forms in which they were introduced to the site. For instance, Meuse flint was brought into the site in different stages of reduction, varying from prepared cores to retouched tools. Palaeozoic quartzite presumably entered in the forms of blades, bladelets and retouched tools. These differences reflect various transport mechanisms as well as different mobility and land use strategies (Rensink 1995).

Summarising all the above (Fig. 7.3), if we exclude the raw materials that can be easily accessed locally and/ or regionally, the imported stones in lithic assemblages from all four concentrations point to three different migration patterns to Gönnersdorf (fig. 7.6). Specifically, the exotic inventories indicate either a route some 100 km from the north along the Rhine valley; or a route some 100 km from the chalk formations and/ or the terrace gravels of the Meuse in the northwest through the Eifel region; or a route some 70 km from the Mainz Basin in the southeast.

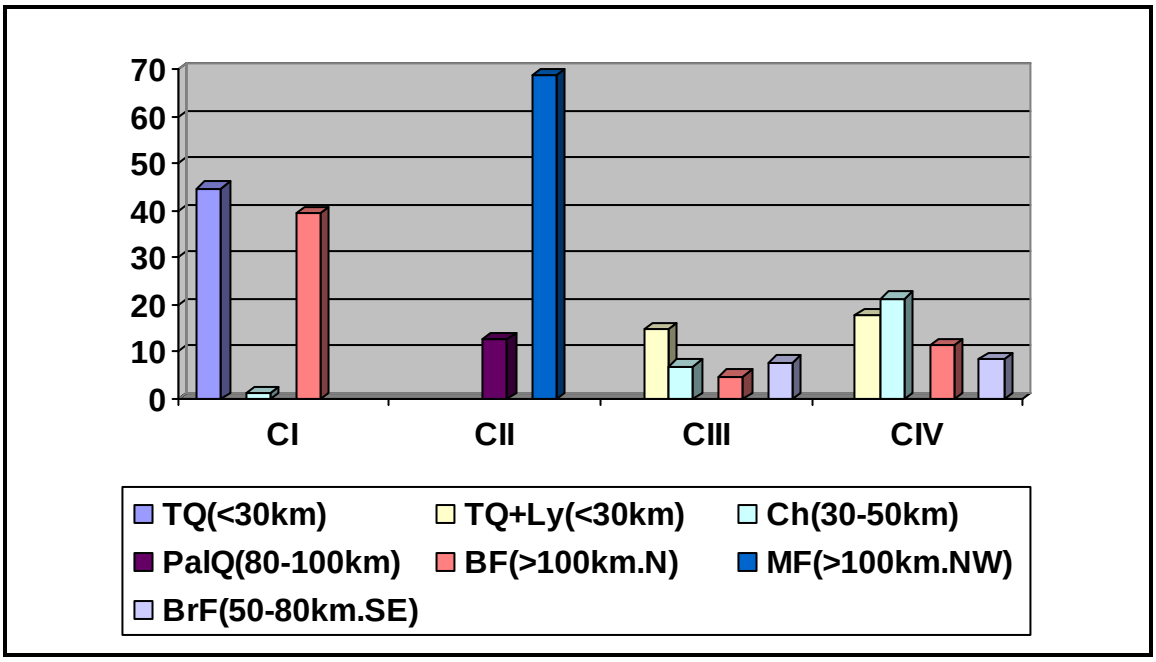


Figure 7.3: Raw material composition of the four Gönnersdorf concentrations(CI-CIV). TQ=Tertiary Quartzite; TQ+Ly=Tertiary Quartzite and Lydite taken together as a local component. Ch=chalcedony; PalQ=Palaeozoic Quartzite; BF=Baltic Flint; MF=Meuse flint; BrF=Brown flint. In parentheses, the approximate distances from the most likely sources are given as well as the direction of transport . Lithic percentages and distances are based on Rensink 1995, Floss 2002 and Street et al. 2006

7.4.2 Andernach-Martinsberg (Lower horizon; concentrations I-IV)

Andernach-Martinsberg was the first Lateglacial site recognised in the Neuwied Basin during pumice quarrying in 1883 (this excavation area is often found in the literature as AN1). It lies on the left bank of the Rhine, opposite the site of Gönnersdorf and less than 2 km away from it. Four excavation campaigns took place at Andernach between 1979 and 1983 and a total area of 100 m^2 and a series of test pits to the south were investigated (area AN2). The archaeological material confirms the existence of two distinct horizons. The older one consists of four distinct zones and gives a mean radiocarbon age of 12980 ± 60 BP (15820 ± 404 cal BP) (Housley et al. 1997; Street 1997, 1998, 2000). This horizon falls well within the first warm interstadial and is consistent with the new dates from Gönnersdorf.

This initial Late Upper Palaeolithic occupation level at Andernach contains four concentrations of lithic tools and settlement waste in total, with CIV having been discovered later (1994-1996, AN3) in the south of the main excavation area close to the test pits (Fig. 7.4).

Figure 7.4: Site plan of Andernach-Martinsberg (Street et al. 2006: 757). The main excavation areas are AN1 and AN2 (first investigated in 1883 and then from 1979-1983) and they contain (the Magdalenian) Concentrations I-III. The three hearths associated with them are not shown here. AN3 is the most recently excavated area (1994-1996) at the south of the site. It contains the (Magdalenian) Concentration IV. The later Federmesser horizon is here indicated by the black dots corresponding to lithic artefacts. The three purple arrows point to the hearths linked to this more recent occupation (see section 7.6.1). The orange arrow specifies the Federmesser concentration that is interpreted as a possible tent (see section 7.6.1 and Fig. 7.7)

Two of the Concentrations (CI and CIII) are major dwelling structures, too large to be transported, and associated with paved surfaces. They seem to be in direct analogy to the three structures observed in the nearby site of Gönnersdorf (CI, CII and CIII). On

the contrary, Andernach Concentration II does not have a paved surface and is located around a deep fissure running through the site, open at the time of occupation, which appears to be incorporated in its spatial organisation. Once again in fashion similar to Gönnersdorf, many of the schist plaques used for the paving of Andernach CI and CIII have engravings of female and animal forms. The newly discovered CIV is identical to CII, both in the raw material and the tool (burins) spectrum (Bosinski 1995; Street 1997).

As is the case at Gönnersdorf, the faunal remains at Andernach are dominated by horse, followed by reindeer and arctic fox (Table 7.4). The analysis of animal bones from the site, along with lithic refits, can help recognise spatial organisation and butchering patterns. A range of details concerning the under-representation of specific parts of the skull in the centre of Concentration I confirm the original hypothesis that there existed a wall-like division or partition. Additionally, the presence of specific skull fragments inside the dwelling indicate that certain activities like boning, marrow fracturing and the consumption of the tongue took place inside the structure. Throughout the site, patterns of bone fracture clearly show that at Andernach marrow exploitation was regular and intense. In pits, systematic crushing of bone for extracting fat and juice is also observed (Street 1997). Indications for seasonality come from tooth eruption patterns, the presence of migrating birds and fish and the remains of certain mammals such as arctic fox and hare. The best founded evidence at Andernach is the association of CI (and quite possibly of CIII) with winter occupation. The use of CII during spring or early summer, is less certain but still plausible due to the presence of anadromous salmonids and the absence of large migratory birds (Street 2000; Street 1998:50).

The close association of CI and CIII and their difference from CII, so far suggested by the paved structures and the possible occupation at different seasons, is further underlined by the recovered lithic assemblage (N=23,166 artefacts according to Floss 2002: 83), which is similar (though much smaller) to the one from Gönnersdorf and equally standardised (Fig. 7.5). Firstly, the dominant raw material in CI and CIII is the regional Tertiary quartzite and “Baltic” flint imported from the moraine deposits to the north, while the most important raw material in CII is flint from the Meuse gravel formations to the northwest (Street 2000) and smaller amounts of Palaeozoic quartzite

(Floss 1991). Secondly, CI and CIII exhibit most stages of working the lithic material and a tool spectrum typical of an "Upper Magdalenian" inventory, with scrapers outnumbering the burins. The débitage and the retouched tools therefore correspond with activities associated with living areas. By contrast, CII is devoid of any primary débitage suggesting that ready-struck blades were brought in (Floss and Terberger 1990: 340). The complete absence of cores cannot be attributed to their later removal from the concentration as the absence of any preparation flakes and other technical pieces indicate that no débitage took place there, apart from some tool modification evidenced by micro-flakes. Refitting efforts also support this viewpoint since, with the exception of a single blade, all other reconstructions were of fragmented blades and bladelets instead of their production sequences (Floss 2000b). In addition, the assemblage is absolutely dominated by burins. These tools and numerous burin spalls and fragments of ivory are seen as evidence for intensive ivory working at this part of the site (Street 1997).

Apart from stone tools, Andernach also produced artefacts such as bâtons percés, barbed points, projectiles and needles made on bone, antler and ivory. Ornamental items like beads and pendants were present throughout the settlement but it seems that especially Concentration II is very rich in exotic mollusc shells (Street 1997). Very impressively, in pit 12 of CII a cache of 46 pierced *Homalopoma sanguineum* and a single *Cyclope neritea* were found. Additionally, two more *H. sanguineum* and six *Dentalium dentale*, all pierced, were discovered on the surface of CII. The first species is exclusive to the Mediterranean, whereas the *Cyclope* and *Dentalium* are equally present in both the Mediterranean and the southern part of the French Atlantic coast (Fernandez 2001).

7.4.3 Synthesis of the GI-1e occupation

To sum up, the large settlements of Gönnersdorf and Andernach-Martinsberg are situated at the north-western end of the Neuwied Basin and are separated by the Rhine. The many similarities between the two sites call for a shared overview. Probably the Rhine was acting more like a metaphorical "bridge", connecting the sites into one settlement system, rather than like a physical barrier separating them into two single

entities. In general, the archaeological record of the period (the species hunted and the way they are exploited, and most importantly the great standardisation of lithic production) verifies a picture of homogeneity of material culture. I will return to this issue at the end of the next section when an explanation for this uniformity is offered.

Lithic raw materials show that groups of humans were visiting Gönnersdorf and Andernach-Martinsberg from different regions (fig. 7.6). The link between Central Rhineland and the northern areas of the Rhine (100 km to the north), the Meuse loess region (100 km to the northwest) and the Mainz Basin (70 km to the southeast) is evidenced by the presence of Baltic flint, Meuse flint and brown flint (the latter in Gönnersdorf CIII and CIV) respectively. Given the regional availability of good quality Tertiary quartzite and other materials it seems unlikely that hunter-gatherers would travel such distances with the sole purpose to acquire flint. Perhaps it is more credible that they would bring it with them, when travelling from the north (and the south), in anticipation of its absence at Gönnersdorf and Andernach. Further support to the existence of a very complex network of long-distance material connections operating in Central Rhineland at the time is lent by the three Gönnersdorf backed pieces made on jasper. The source of this mineral is located in the south of the Freiburg area, some 300 km away. Aside from the lithics, similar evidence is offered by a quantity of Mediterranean mollusc shell. These are found throughout both sites (Table 7.6), but especially Andernach CII includes a small cache of mollusc species which originate from areas more than 800 km away (Floss 2000b). The following section will provide a further explanation of such contacts within the context of personhood creation.

SPECIES	ORIGIN	GÖNNERSDORF N	ANDERNACH N
Homalopoma sanguineum	Mediterranean	5 (in CI)	48 (46 in CII cache + 2 on CII surface)
Dentalium inaiquiscostatum	Mediterranean	5 (in CI, II, III)	
Dentalium vulgare	Mediterranean + Atlantic	17 (in CI, II, III)	
Cyclope neritea	Mediterranean + Atlantic		1 (in CII cache)
Dentalium dentale	Mediterranean + Atlantic		6 (in CII)
TOTAL		**27**	**55**

Table 7.6: Composition of the shell assemblages from Gönnersdorf and Andernach. Data from Fernandez 2001

The dwellings of these settlements were occupied over a long period, on a seasonal basis, by people who would visit them repeatedly. At both sites, there seems to be an association between concentrations using Tertiary quartzite and Baltic flint (Gönnersdorf CI and CIII, and Andernach CI and CIII) and occupation during the colder part of the year. If there is another correlation between utilisation of Meuse flint (Gönnersdorf CII and Andernach CII and CIV) and the summer months, it is less clear (Table 7.7). The meaningful connections of raw materials and the time of year they were used at specific places may be quite obscure. In the following section however, I will argue that a possible explanation may lie in the significance of the place itself through time.

GÖNNERSDORF	RAW MATERIAL	SEASON	ANDERNACH	RAW MATERIAL	SEASON
CI	**TQ** **BF**	**Winter**	**CI**	**TQ** **BF**	**Winter**
CII	MF PalQ	Summer (?)	CII *(ivory workshop)*	MF PalQ	Summer (?)
CIII	**TQ** **BF**	**Winter**	**CIII**	**TQ** **BF**	**Winter**
CIV	TQ Ch BF BrF	?	CIV	As CII (MF+PalQ)	Summer (?)
(Lithics N=60,721)			(Lithics N=23,166)		

Table 7.7: Possible correlation of raw material distribution and seasonality: a kind of identity signature? Gönnersdorf CIII yields six raw materials in total, which may indicate an initial and at least one subsequent occupation (Stapert and Terberger 1989). The two raw materials mentioned here however were current at the same time and were associated with the "dwelling" structure which is comparable to CI. TQ=Tertiary quartzite; Ch=chalcedony; PalQ=Palaeozoic Quartzite; BF=Baltic Flint; MF=Meuse flint; BrF=Brown flint

Faunal remains from both sites indicate a large diversity of animal species, which is in good agreement with the two characteristic vegetation types of this period: an extended grass steppe on the plateaus and a gallery forest in the valleys (Rensink 1993: 103). Seasonality studies show that humans could live in the Central Rhineland at all times of the year. Dental, postcranial and antler evidence prove that reindeer were hunted mainly or exclusively in the autumn. By contrast, horse appears to have been hunted on a year round basis (Gaudzinski and Street 2003). Seasonal migratory patterns for certain species (for example reindeer, saïga antelope, mammoth, salmonids) lead to alternating excesses and shortages of resources. These seasonal fluctuations may have been counterbalanced by storage of surpluses and by the extensive use of other resources available throughout the year, such as the horse, the most important hunted game at the region during this period (Baales and Street 1996). Apart from the prevailing climate and vegetation, the abundance of bone material may be attributed to repetitive occupation episodes. The excellent preservation gives a wealth of information on many activities related to exhaustive processing of fauna (i.e. butchering, hide preparation, meat

consumption and marrow extraction) but not so much on hunting strategies. Finally, it should borne in mind that the debris may have been accumulated over considerable periods of time, when the site was independently revisited and reused. This seems especially certain for material found in pits. It is therefore hard to dissect the actual function of the site itself in every phase of its occupation since it can vary considerably. What we have is a bulk of activities but their temporal resolution and assignment is elusive. Even in instances where faunal refits represent temporally linked events of butchering or processing (Street 1997), the gradual accumulation of material over considerable time spans is not out of the question. According to the "absence of evidence" motto, the repeated use of structures and concentrations may have still taken place even if it is not discernible in the record. If the activities areas were occasionally cleared out, the recovered animal remains would only belong to the last phase of occupation before the final abandonment.

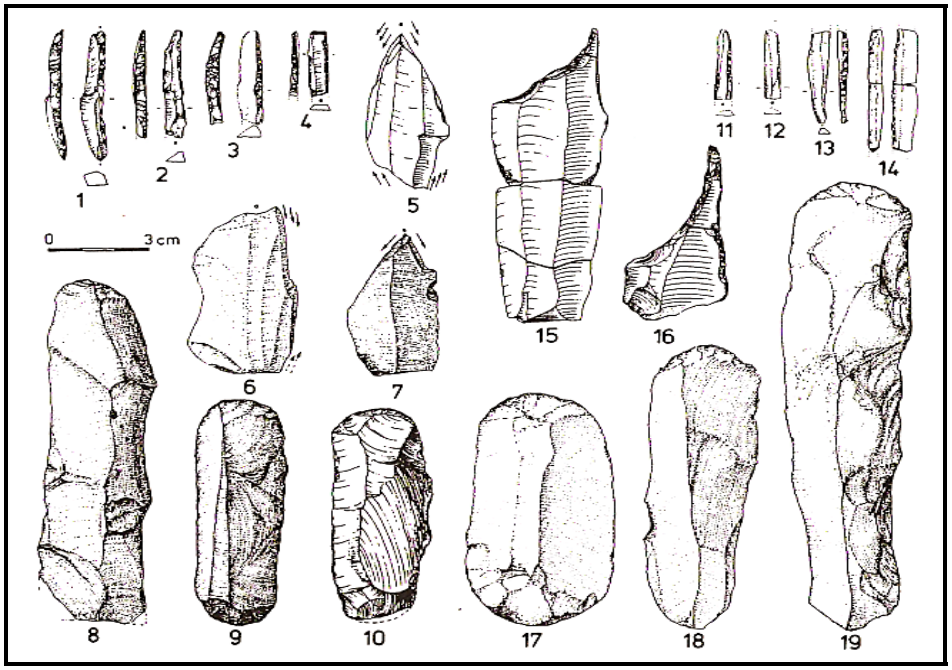


Figure 7.5: Magdalenian lithic artefacts from Gönnersdorf and Andernach. Gönnersdorf: 1-4. backed bladelets; 5-7. burins; 8-10. end-scrapers. Andernach: 11-14. backed bladelets; 15-16. zinken; 17-19. end scrapers (Street 1997: 551)

The lithic assemblages from both sites are quite comparable (Fig. 7.5). Despite the variations that appear in different concentrations, in terms of raw materials, débitage

and specific tool inventory, the overall picture is one of great standardisation. The chaîne opératoire reveals a systematic production of high quality blade industry with well prepared cores. Regular blades provide the most common blanks for the retouched tools. Raw materials of local origin were introduced in the form of prepared cores, while non-local materials entered in the form of prepared cores, blades, bladelets or finished tools. The abundance of backed bladelets in association with the bone and antler component of the tool kit make it clear that the hunter-gatherers of the period used the spear thrower technique (Floss 2002, 2000b).

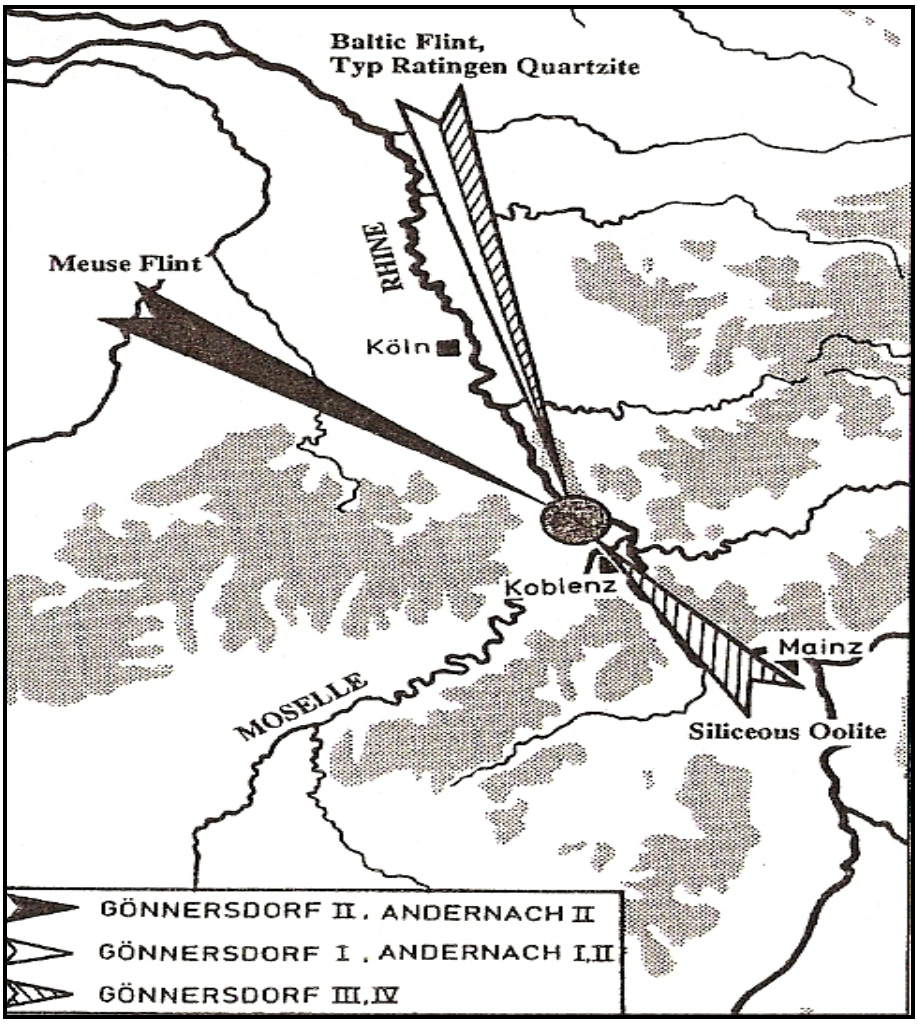


Figure 7.6: Provenance of exogenous raw material in the Magdalenian sites of Gönnersdorf and Andernach (Bosinski 1995: fig.71). The sites in the Neuwied use Baltic flint from ~ 120 km to the north, Meuse flint from ~ 100 km to the northwest and Brown flint from ~ 70 km to the southeast. The presence and quantity of the materials vary among concentrations

7.5 IMPLICATIONS FOR PERSONHOOD DURING THE GI-1E OCCUPATION

During the first half of the Lateglacial interstadial, glimpses are gained into the constitution of the person. It is argued here that in the Neuwied Basin, various aspects of materiality are actively employed to form the everyday reality of social relations. These in turn greatly define and transform the people who lead a relational existence within a specific spatiotemporal actuality.

Firstly, a major aspect of the Central Rhineland archaeology during this period, which is missing from the following one, is the presence of the big (quasi-)permanent habitation structures (Gönnersdorf CI-II-III and Andernach CI and CIII). It is only common sense that their construction involved a great deal of investment both in time and labour. One reason behind their building may be the reasonable need for shelter, especially during harsh winters as suggested for CI and CIII in both sites. Also the hunting of large herd animals, like horse and reindeer, imply cooperative techniques and thus larger group size that need encampment. Moreover, the seasonal surpluses and deficits of food due to the fluctuations in migratory game may call for storage, which also implies the necessity for structures. Another explanation sees the structures as evidence for the significance of the Neuwied Basin sites as "aggregation camps" for different human groups exploiting different regions of a vast area (Rensink 1993). In any case, the size, the spatial patterning and the relevant "permanence" of at least some of the concentrations are good candidates for a scenario of repeated visits. Multiple occupations have been suggested for both sites (Street 1997) mainly thanks to the heterogeneous date set (see section 7.3.1) and the abundance and variability of the excavated material. In such an event, the importance of the concentrations for the people who chose to inhabit them again and again is evident. They could function as areas of accumulated memories. Collective memory is not only a powerful bond that reinforces social relations but also a process whose symbolic effect implicates people, objects and places in a layered temporality. And the significance of the surrounding places and their associated activities could be translated as preferred spaces for a repetitive identity signature. For example, hunter-gatherers who habitually revisited the same spot may

experience and/ or exhibit aspects of their identity through the materiality of the stones that they chose to transport and use there. According to this narrative, the synchronous regional Tertiary quartzite and exotic Baltic flint regularly associated with CI and CIII (Table 7.7) could be viewed (or experienced for that matter) as the material markers of individual persons that introduced/ used them while living there during the winter months. The co-presence of raw materials with dual origin could be explained by people carrying Baltic flint with them while on the move from the north and supplementing their needs with local quartzite when stationed. Equally, the two materials could signify two social groups who (intentionally or not) coincided in the same place over the cold part of the year. In either instance, irrespective of geography, the hunter-gatherers are connected to the type of raw material, at least while occupying CI and CIII. In other words, the materiality of stone is relevant to who they are. This explanation can be applicable to group identity (be it one group using multiple resources or more co-existing groups) as well as personal/ individual identity. In short, the association between people, things and space is part of the web of relational connections that make up the prehistoric person. And the concentrations of Gönnersdorf and Andernach themselves may be recognised as relational identities, pretty much like human persons (Jones 2005).

Supportive argument for the importance of material things and accumulated memories in the establishment of self identification is lent by the presence of mammoth bone and tusk fragments that greatly predate the occupation at Gönnersdorf (OxA-10239 and OxA-10199, table 7.1). Obviously, these elements were collected as fossils. But even as old fragments, they retain the essence of the whole they came from. In a way, they represent the impressiveness of the beast itself, the difficulty and danger entailed in its hunting, the nutritious importance of the game and the social associations of a co-operative pursuit. As such, they were picked up and, although it is impossible to estimate for how long they were carried around or used and re-used over generations, they acquired a meaning of connectedness between people, actions and things in present and distant times.

The recorded spatial organisation (partitions, hearths, pits) of the dwellings are indicators of an accumulation of socio-economic activities. Manufacturing lithics from

nodules following all the stages of the production, maintaining tools, making specific artefacts in specialised areas, processing game exhaustively, sharing the meat, cooking, cleaning, creating art, producing, gathering and keeping ornaments are all activities that have entered the collective *habitus*. These embodied repetitive gestures that secure the continuation of everyday life are static, in the sense that they are contained in a meaningful place. At Gönnersdorf and Andernach social life is accumulated in space and over time. The materialities of the things, the places (the two sites along with their concentrations) and the people involved in the creation of a hybrid web of continuing interconnections come together through their common embededness in the social practice of accumulation. Thus, within the Neuwied settlements, the person is fabricated through the accumulation of social life.

Based on its large quantities in both sites, it is safe to assume that lithic procurement strategies in the Central Rhineland were directed primarily towards the acquisition of local Tertiary quartzite. The easy availability of this perfectly usable rock, coupled with the year-round accessible (though seasonally variable) game, can only contribute to the lift of survival angst for the hunter-gatherers of the Neuwied. Therefore the documented frequent use of an array of other materials, whose transfer involves distances up to 120 km, is particularly indicative of strategies unrelated to fulfilling practical needs or meeting subsistence goals. In others words, lithics imported from afar must reflect preference rather than necessity and their procurement and use must be rooted in social rather than in economic life.

The concept of choice may be underdeveloped in the literature of the Palaeolithic but it is implicit in the concept of the chaîne opératoire. Technological choices associated with the selection of suitable raw materials and the organisation of their acquisition are put into effect far before the actual knapping process (Sternke 2005). In the Neuwied, the materialisation of choice is evidenced not only by the presence of exogenous flint types but also by the logistics of their transportation into the sites. In the Upper Palaeolithic, the rule of thumb is that the transport over long distances of substantial quantities of nodules or cores happens in the occasions where the local raw materials are of poor quality for the desired blade production. By contrast, wherever the local rocks are of high quality only a small amount of raw material from afar is

introduced and this is normally done on blanks and tools, since they are not required to cover the totality of lithic production (Féblot-Augustins 2009). The fact that at Gönnersdorf and Andernach the picture is not as clear-cut points towards an attitude of technological choice. The lithic assemblages prove that both procurement patterns are in operation. In many instances and in spite of covering distances of about 100-120 km to the flint sources, the material comes in the heavier and less practical form of prepared cores. Elsewhere, (as in the case of the "ivory workshop" at Andernach CII) the favoured transport option is the ready-made blanks and tools. Additionally, this choice of blanks implies their maximal utilisation: 63% of the total laminar blanks have been transformed into retouched tools and only 5 complete blades have been found to be neither fragmented nor retouched (Floss 2000b: 90-91).

Thus it becomes apparent that the transport of flint, in the presence of excellent local Quartzite, is the conscious material choice of individual agents. The Lateglacial hunter-gatherers of the Neuwied would select their materials, their shape and even the extent of their anticipated usage before they set out to visit the sites. Such selective behaviour can of course rely on the expectations and limitations of the lithic technology employed by specific "cultural groups". This would be the social values and norms, the societal "structure" in Giddens terms (see 3.5.2). At the same time, the intentional choices are the practice of the individual agents who perform the chaîne opératoire. This would be the mechanism they employ for the reproduction (or alteration) of the given structure, all while negotiating and producing their personal identities.

The Baltic flint from the north, the Meuse flint from the northwest and the brown flint from the southeast indicate at least three different geographical zones that are interconnected by raw material transfers (fig 7.4 and table 7.6). The nature of the relationship between these regions is still unknown. The proposal that the Neuwied acted as a kind of "aggregation camp", a meeting point of sorts, for different groups has been already mentioned (Rensink 1993). A further explanation could be that episodes of settlement were not strictly contemporary, so that the use of different raw materials documents quite unrelated events (Street 1998). While time depth for the occupation is a very real option for both sites (see 7.3.1 and discussion above), the simultaneous use of kilometrically distant raw materials has been established. For instance, I already

mentioned that at Gönnersdorf CIII the proposed first phase of the occupation involved primarily Tertiary Quartzite and Baltic flint and in smaller quantities chalcedony and Meuse flint (Stapert and Terberger 1989). Thus, at least at times, the link between the local and the exotic has been contemporaneous. What becomes clear is that during this time the central Rhineland region is "in the centre of one extensive raw material web, stretching over a large area that extends from the Mainz Basin in the south to the moraine area in the north" (Rensink 1995: 99).

The exploitation of the non-local lithics in the Neuwied could be explained in various ways. For instance, studies in seasonality, spatial distribution and the establishment of a finer chronology could suggest whether the imported stones were the material results of the actions of different groups operating in one place; or one group visiting many places; or many groups exploiting different environments seasonally; or groups occupying small northern campsites only briefly while staying at the larger residential camps for longer periods. Nonetheless, the potential answers would place the group/ groups at the centre of a predetermined action that complies with an existing societal structure (see 3.5.2.1). For this reason, I wish to shift the focus of the questions linked to the lithics of the Neuwied from the unit of the group to that of the (generic) individual. The archaeology of the Lateglacial Middle Rhine can be best understood as the material outcome of the social practices of the individual because in that case his/ her involvement in different livelihood scenarios is imbued with agency and his/ her relational existence is negotiated through networks of hybrid relations. The core of the argument is in agreement with the theoretical framework I presented in detail in earlier chapters.

In the general context of Palaeolithic research, raw material provenance studies have resulted in a better appreciation of the interaction between prehistoric people, their environment and the social organisation required to successfully exploit that environment. Primarily, lithic procurement and distribution is plotted and interpreted as a product of and a proxy for mobility (Binford 1980; Eriksen 1991; Fisher 2006; Féblot-Augustins 1997; Conneller 2007). Alternatively, lithic transfers are often engulfed within other social processes and are interpreted as evidence for the extent of networks of connections (Gamble 1999; Whallon 2006). On the one hand, the assessment of the

scale of movement across the landscape from a lithic perspective (techno-economic patterns of procurement, raw material transfers, assemblage variability) is a useful model based on the unit of the group. In such discussions, the existence and extent of interaction networks is approached as the form of social organisation that is necessary to facilitate landscape knowledge, environmental adaptation and cultural behaviour (Féblot-Augustins 2009). Analyses of transport strategies are based on the correlates of distance and the form in which the materials are moved (i.e. unworked nodules, preformed cores, blanks, tools). Then the identification of these transfer patterns is realised as one of the binary oppositions, such as the concepts of direct and indirect/ embedded procurement (Binford 1980), of residential and logistical mobility (*ibid*.), of curated and expedient technologies (Binford 1979) or of provisioning places and provisioning individuals (Kuhn 1992). On the other hand, instead of the mobility associated with raw material procurement being studied as a socio-economic variable in its own right, it can be seen as the mechanism of establishing social networks. The range of such webs of social interactions is also measured by raw material transfer distances but in this viewpoint the individual is promoted as an analytical unit (see section 3.3). In relation to lithic production, the individual is represented by his/ her actions (the embodied *habitus*) and technological choices. These concepts transform the performance of the chaîne opératoire into a social process and turn the individual into an agent, who reproduces social structures with his/ her routinised actions, while creating his/ her social identity (see sections 3.5 and 4.2). In this context, stone tools are the distributed extensions of personhood (Field 2005: 35).

Unsurprisingly, most of the work dedicated to the raw material record from the Neuwied focuses on elucidating Lateglacial (both Late and Final Upper Palaeolithic or "Magdalenian" and "Federmesser") mobility strategies (Floss 1991, 2000b, 2002). In contrast, the present discussion considers the raw material variability as a material indicator of social negotiations and expressions of individuals that operated among changeable social contexts. I am here proposing a twist on the model of social networks: the lithic raw material patterns observed in the Neuwied during the Lateglacial are less a strategy of survival by ensuring/ securing resources and alliances and more a recurrent socio-material enchainment, which affords regular re-establishment of connections with

places, people and things as a way of affirming a fluid personal identity. It becomes apparent therefore that this enchainment acts as a most critical factor for the maintenance of the homogeneity of the material culture (see 7.5.1). Continuing relationships across the landscape are a precondition for uniform material expressions, as is the standardised blade production in Gönnersdorf and Andernach. The connectedness in regular intervals achieved through extended social networks (Gamble 1999) reflects the use of raw materials towards the continuous reproduction of an engagement between humans and materials within a landscape of habit. Mobility and network patterns, evidenced by lithic raw material imported in the Neuwied basin, can best be understood as the result of a form of personhood that is extended by material objects. In contrast to the prevailing western individuality, the understanding of Lateglacial personhood relies more on partibility, extension and circulation.

As for the non-lithic exotic material (the pieces of jasper from Gönnersdorf and the Mediterranean shell from both sites), it is obvious that they travel exceptional distances (~300 km and ~800 km respectively) that are not comparable to the ones covered by flint transports. It seems therefore that they point to outstanding instances of exchange and contact, only related to individual behaviour. These items demonstrate the existence of far removed interaction networks and the pattern of individual persons acquiring portable kit, but in a context different to the strategy of "provisioning individuals" proposed for the Middle Palaeolithic (Kuhn 1992). The Mousterian model describes small quantities of long distance lithics introduced as personal equipment (mostly blanks and tools) by groups who fulfilled their subsistence requirements as they went along rather than anticipating needs. In the context of Lateglacial hunter-gatherers, these few tools and ornaments may be still provisioned by individuals but in a purely non-functional context, where the significance lies with the materiality of the items and the relational meaning they convey. It is quite possible this time that materials move more than people. The ornaments may bridge the mileage between Central Rhineland and the Mediterranean irrespective of whether they were introduced by persons who actually travelled the whole distance. Because, even if they did transverse the landscape by exchanging hands on the way, they would still retain the materiality of their origin as well as their intermediate links to people and places. The exchange carries personal life

histories and artefact biographies among places and through time. Hence, the practice of enchainment, in both an actual and a metaphorical sense, can be applicable to these pieces of material culture.

Enchained relations of exchange are obviously conditioned by factors of mobility and often the archaeological evidence for differentiating between the two is unclear at best. The same archaeological assemblage may preserve evidence of direct lithic procurement and acquisition of selected lithics and other truly exotic materials through indirect exchange (Soffer 1991). A way to overcome this difficulty is to adopt the social practice as the corner stone of an interpretative framework for the Palaeolithic. Social life happens at the intersection of networks, which in turn offer the grounds to individuals to perform their materially rooted personhood. Hence, in enchained relations of exchange it is not only the material items but also the personhood embodied in them that are exchanged. It is as if the materiality of a Baltic flint blade maintains the social essence of a network of people, places and things.

To conclude, the hunter-gatherers of Gönnersdorf and Andernach during the first part of the Lateglacial constituted their persons in two ways, both relational in nature (Fig.7.7). A form of personhood is developed in association with the semi-permanent character of the dwellings. These constructions that hold a degree of significance over time provide a reference point for the accumulation of materials and repeated actions. The resulting (static) *habitus* helps generate a person that is likely to acquire a sense of collective, accumulative identity. A different type of person emerges when the mobile nature of everyday life sets them in motion across the landscape. An extensive network of exchange, in which both people and objects are in circulation, fabricates a kind of personhood situated in the fluidity of enchainment.

The proposed model of a layered mode of being agrees well with the non-dualistc, relational epistemological paradigm that underlies the general argument of this thesis. The archetypical distinction between collectors stemming from logistically organised base camps and residentially mobile foragers can never be a straightforward one. It is probable that most Palaeolithic hunter-gatherer groups engaged in both strategies at different degrees and with different intensity. As a result, the people making up the groups can only constitute their selves in more than one rigid manner. The

ensuing relational persons present us with a better perception of the social dimension of their lives and of their creative alliances with their world.

In the same vein, the next two sections will deal with the archaeology of the second phase of the Lateglacial interstadial in Middle Rhine. The patterning of the data will be once more filtered through the familiar issues of interactional understandings of social practices occurring in social landscapes.

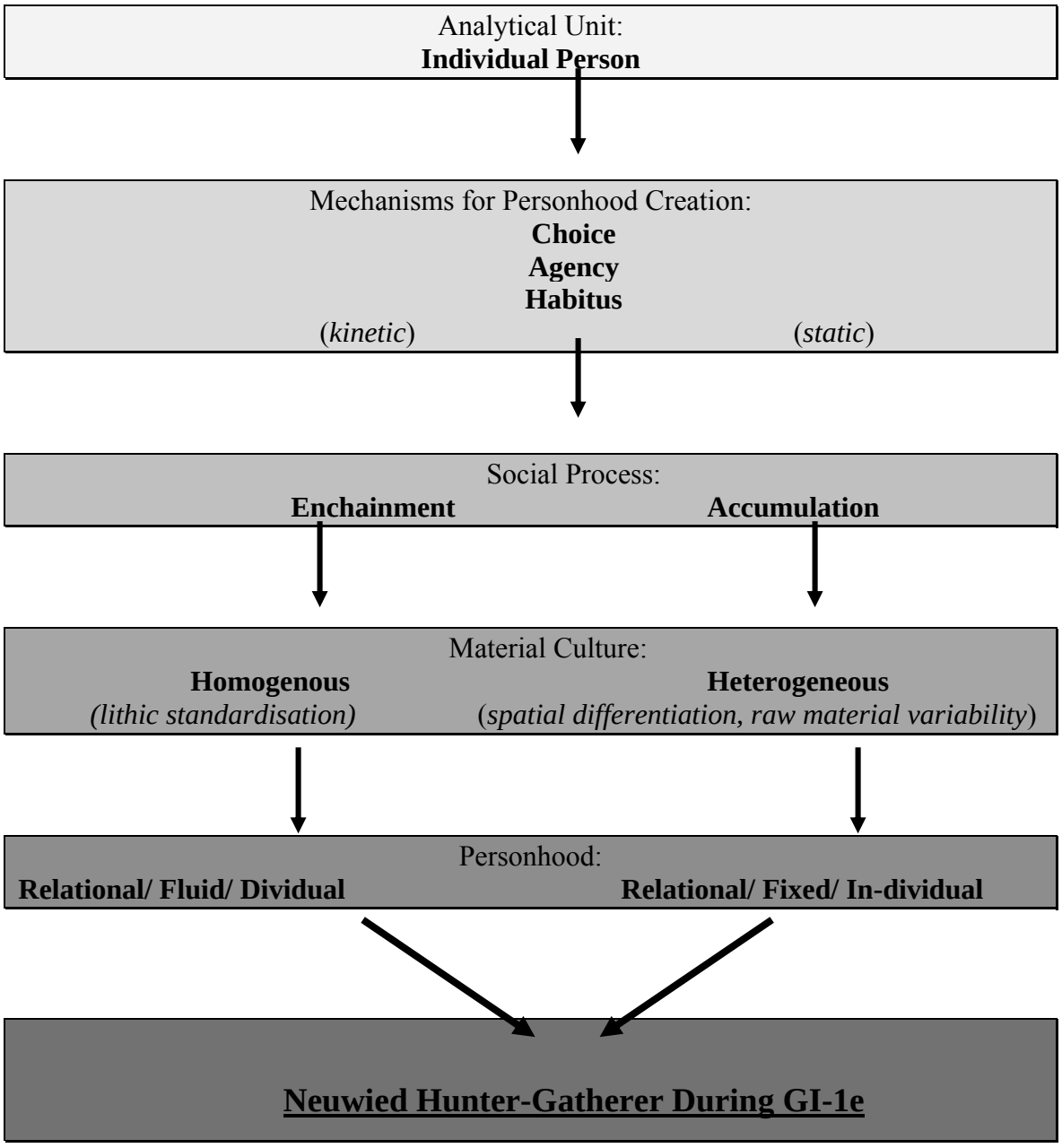


Figure 7.7: Schematic reconstruction of human personhood in the Neuwied Basin during the GI-1e

7.6 OCCUPATION DURING THE GI 1C-1A (ALLERÖD)

The second interstadial of the Lateglacial corresponds to the traditional pollen zone of the Alleröd and its onset in conventional radiocarbon years is placed either around 12,000 BP (13,950 cal BP) or around 11,800 BP (13,750 cal BP) depending on whether the presence of a preceding cold stadial (Older Dryas or Dryas II) can be verified (see section 1.3.1). The GRIP chronology incorporates both events within its first Greenland Interstadial (GI-1), reserving for the short interval of climatic deterioration the subdivision GI-1d (which immediately follows the warmer GI-1e) and for the next mild period the ensuing subsequence GI-1c to GI-1a. Especially for the Central Rhineland, as for elsewhere in northern Europe, the end of the Alleröd is roughly placed *circa* 10,850 ^{14}C BP, which is calibrated to 12,760 cal BP (see section 7.3; also Table 1.1). In comparison to the colder first half of the steppe-tundra, this period is more temperate and characterised by a mosaic landscape of relatively open woodland alternating with more open areas with rich herbaceous vegetation.

During this time, the Rhineland was occupied by what is still called in the literature "the Federmessergruppen". Though the term originally referred to the typological and regional distribution of cultural groups characterised by curve-backed points with steep retouch (the typological definition of the Federmesser point), it now generally applies to the northern European technocomplex with curved-backed points of the latter part of the Lateglacial as a whole (Baales and Street 1996; also see sections 6.3 and 6.3.1). In the region of Middle Rhine, the transition from the first to the second part of the Lateglacial is still largely unknown. By contrast to the rest of the European record, where the general replacement of the Magdalenian by the Federemesser groups can be demonstrated by the process of the so-called "Azilianisation", there is a hiatus of some 200 years between the well-dated major Magdalenian sites of Gönnersdorf and Andernach and the Alleröd sites buried below the tephra of the Laacher See volcano (12,960 cal BP) (Baales and Street 1998). There is however a possible indication for a younger short episode of activity at the southwest of Gönnersdorf. A poorly defined concentration of lithics containing otherwise uncommon backed elements and of animal

bones indicative of a more temperate fauna may manifest an intermediate phase of occupation (Street 2000; also see section 7.3.1)

At present there are five major sites of the period in the Neuwied Basin (Fig. 7.1). A sixth site, that of Boppard in the district of Rhein-Hunsrück-Kreis has been recently discovered and assigned to the Federmesser group but cannot be included in this work because of its extremely limited archaeological material. It is situated 20 km south of Koblenz and only a few m^2 have been excavated. In terms of finds, Boppard yielded a spatula with lateral incisions on a red deer metatarsal and the rare for the period remains of wild boar (*Sus scrofa*) (Baales 2006). At Andernach-Martinsberg (at the northwest of the Basin) a more recent occupation has been identified. The settlement of Niederbieber is situated on a spur of land and it contains numerous lithic and bone evidence in a large spatially differentiated area. Further sites are located at Urbar, in the east bank of the river, and at Kettig, occupying a promontory in the south of the Rhine. The close similarities of the assemblages from all four settlement localities indicate that they are also chronologically very close. In addition, the majority of the radiocarbon dates for the sites form a valid series and they mostly date to the latter half of the second interstadial (see 7.3.1). It is therefore the earlier part of the Federmesser groups, with only some dates from the Andernach, that remains less known for the central Rhineland. This situation is the exact opposite of what is true for the backed point industries in northern France, where an internal chronological succession has been achieved (Baales and Street 1996; Street and Baales 1997). Until very recently, the Final Palaeolithic occupation in the region ended with the aforementioned sites buried under the Laacher See volcanic ashes, since the very last stadial of the Pleistocene (the GS-1 or Younger Dryas) is unknown in Central Rhineland. However, in 2001 a site discovered in the locality of Bad Breisig, a few kilometres to the north of the Neuwied, became the only record of human presence after the volcanic eruption (Baales and Jöris 2002).

7.6.1 Andernach-Martinsberg (Upper horizon)

The most recent expeditions in Andernach-Martinsberg (1981-1983, also known as Andernach 2 to differentiate it from the excavation of the previous century, and 1994-1996 or Andernach 3) proved the existence of a younger archaeological horizon at the site, which was overlooked in the original excavation. The horizon lies between the Magdalenian concentrations (CI-CIII) and straddles the centre of the main excavated area (or AN2). Additionally, the investigation of the surface (113 m^2) to the south of the excavation that yielded CIV confirmed the presence of a Federmesser concentration of mainly chalcedony artefacts (or AN3) (see Fig. 7.4; Baales and Street 1998; Street et al. 2006). In general, the archaeological material seems to have remained horizontally *in situ*, but it has been reworked vertically and is found throughout the depth of the deposit overlying the previous occupation (Bosinski 1995). The combined value of the AMS dates for the occupation is 12010 ± 110 BP (14014 ± 294 cal BP), which is older than expected, especially when compared to the dates for the other Federmesser sites (see section 7.3.1 and Table 7.3). If this dating is accepted, the second phase of Andernach seems to be well under way at the beginning of the Alleröd. Nevertheless, for methodological reasons, this chronology that contrasts to the rest of the Federmesser occupation in the Neuwied is often rejected (Baales 2006).

Contrary to the older phase, there are no dwelling structures in this period. However, the remains of at least three hearths are indirectly identified by concentrations of charcoal, burnt bone and débitage. More recently, the analysis of different find types from the newest material recovered from the southern part of the site (AN3) points to the existence of a possible dwelling feature (Fig. 7.8): a polygonal (of pentagonal or hexagonal shape depending on the acceptance of a possible post hole) structure, closed on three sides and occasionally open to northwest, with a central fire place and with a maximum inner surface of 14 m^2 (Gelhausen et al. 2004).

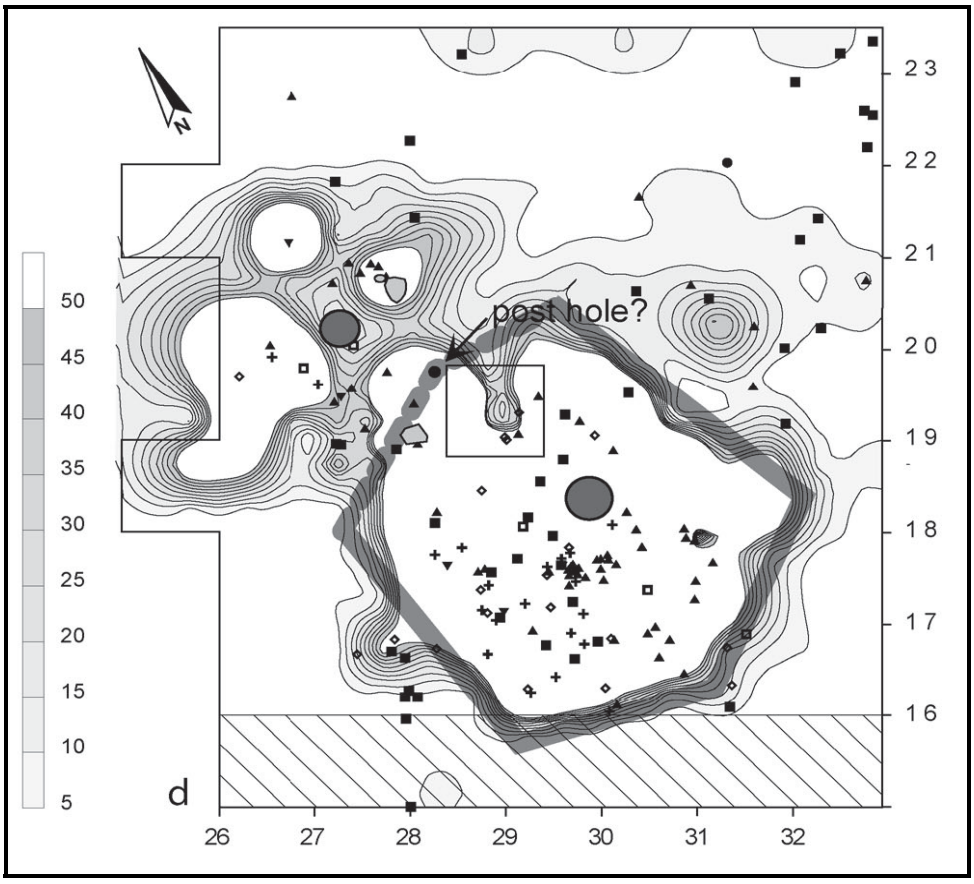


Figure 7.8: Andernach, Upper horizon (Federmesser), section of the surface excavated in 1994-1996, south to the main site (AN3). Suggested exterior partition wall of the latent dwelling structure (adapted from Gelhausen et al. 2004)

The recovered animal bones are quite different from the ones of the underlying occupation and they reflect the milder climatic conditions prevailing during the Alleröd. Arctic species are no longer present and woolly rhinos and mammoths are already extinct. Instead, the typical large mammals of this period are red deer, elk (moose), large bovids and more rarely roe deer and horse (Table 7.8). It is unclear if complete carcasses of all individuals of these species were originally present, but at least for the most common species, the red deer, almost all the body parts were identified. Refitted bone fragments from several species show that body parts of the same individual were scattered across the entire occupation area. As for information on seasonality, there are some indications for occupation during the warmer half of the year for Andernach 2, but whether this was exclusively the case is not certain (Street 1997). Although bone

conservation is at a worse state in the southern part of the site (Andernach 3) a possible autumn/ winter occupation has been suggested (Street et al. 2006: 776).

	Andernach		Other Sites
	NISP	(MNI)	
Horse			x
Aurochs?	54	(2)	?
Ibex			x
Chamois	26	(2)	?
Red deer	209	(5)	x
Elk	36	(1)	x
Roe deer	?		x
Pig			?
Wolf			x
Dog	?		
Red fox			x
Badger			x
Bear			x
Beaver	44	(2)	x
Wood mouse		(19)	x
Hamster	5		x
Bank vole	83		x
Water vole	69		x
Root vole		(93)	x
Voles	98		x

Table 7.8: Composition of mammal fauna (ungulates, carnivores and rodents) in the Alleröd sites of Central Rhineland. NISP and MNI information is only available for Andernach. (X) indicates presence of species in other sites. (?) indicates questionable species. Data combined from Street 1997, 1998; Baales and Street 1996; Bosinski 1995

The lithic industry at Federmesser Andernach is typical for the Final Upper Palaeolithic of northern Europe (Fig 7.9). The assemblage is much smaller than the Magdalenian one (N=2,793 artefacts; Floss 2000b). Despite its size, the lithic complex contains 13 varieties of raw material, often of poor quality, and representing a total of 20 small nodules. Refits show that all stages of artefact manufacture took place within the excavated area and, much like animal bones, the spatial patterning of the débitage confirms the unity of the excavated area. For example, a nodule of Meuse flint was decorticated at one position, reduced to blades and flakes at a second location, and

discarded at a third point, all within an area of less than 10 metres in diameter. This applies to almost all raw materials, so that a zone of activity some 10 x 8 m in diameter can be defined. Within this larger area, each raw material has a distinct centre of distribution, which are interpreted as knapping scatters (Street 1997).

The sources of the 13 raw materials range from local, to regional to exotic(see Table 7.11): lydite, silicified limestones, tertiary quartzite and quartz are procured locally or regionally from the Rhine gravels; chalcedony (of the Muffendorf type, with integrated molluscs) is transported from the Bonn area some 40 km to the north; as in the Magdalenian times, two types of flint are transported, one from the Meuse gravels 100 km to the northwest and another from the moraine deposits 100 km to the north; silicified tuff comes from the Mainz basin 100 km to the south; and siliceous oolite is imported from the Nahe river drainage 100 km to the south. All raw materials were imported in nodules or pebbles that were not subjected to any prior preparation. In general, the assemblage is characterised by a high percentage of flake tools, unsystematically retouched pieces, backed elements as the most common tool type, and an overall reduction in tool size (Baales and Street 1998; Floss 2002; Floss 2000b).

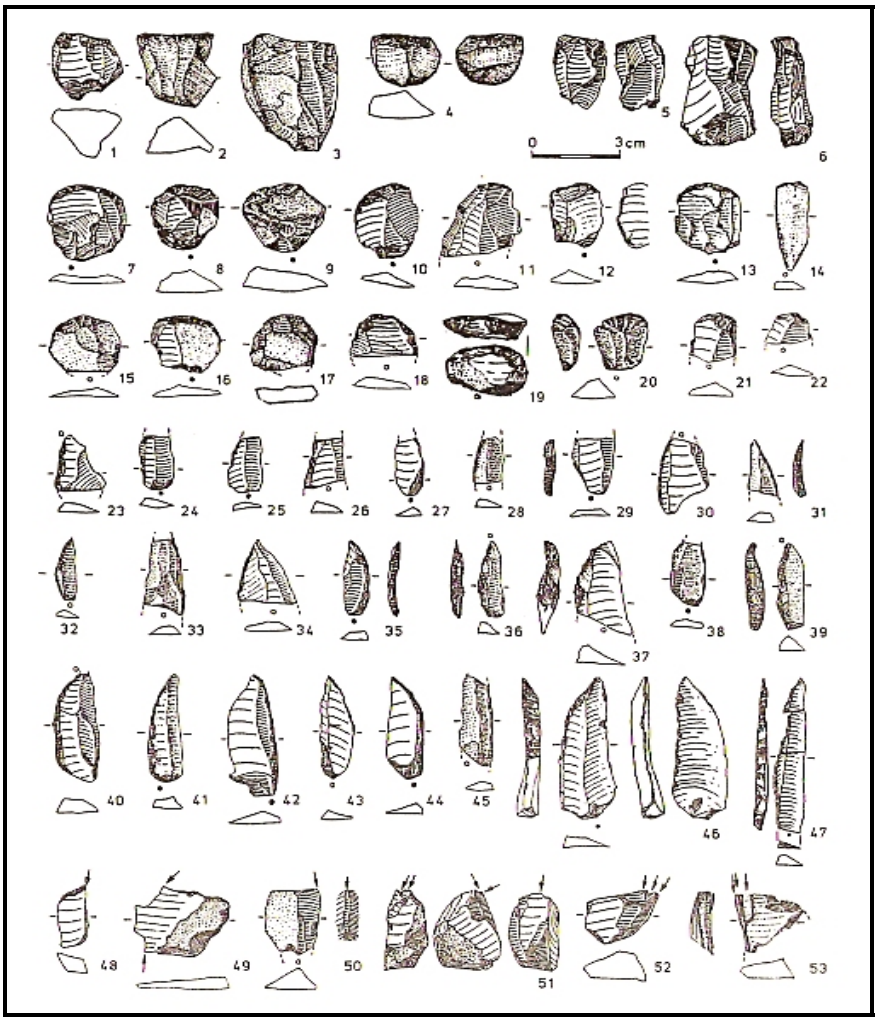


Figure 7.9: Lithic artefacts from Andernach (upper horizon). 1-6 cores; 7-22 (short) end scrapers; 23-47 backed points; 48-53: burins (Bosinski 1995: 917)

7.6.2 Niederbieber

The settlement of Niederbieber, near the town of Neuwied, covers an area of c. 10,000 m^2 and is the largest known Lateglacial site in Central Rhineland (the archaeologically investigated area is some 800 m^2). Successive excavation seasons uncovered more than seventeen smaller or larger concentrations of lithic and faunal remains (Fig. 7.10). The analyses of specific large find concentrations (Areas I, II, IV-VII) have yielded important information not only for particular settlement features and activities performed on-site, but also for the period in general (Street et al. 2006) The

only methodologically acceptable AMS date for the site is OxA-2066: 11110 ± 110 BP (see section 7.3.1)

Even though no apparent habitation structures could be found, burned areas of sediments representing hearths were discovered. In Areas I, IV, and VI the main characteristic is a concentration of lithics and bones of 5-6 m in diameter with a central hearth. Especially for the 46 m^2 of Area IV, the distribution pattern displayed by the artefacts is suggestive of a former dwelling structure with a slightly polygonal floor plan measuring about 4 x 4.5 m (Gelhausen et al. 2004). In Area II, a mixture of different features like fireplaces, stone accumulations and concentrations of burnt and unburnt animal bones were discovered. The settlement features and especially the heterogeneity of materials of Area II are comparable to the Andernach upper horizon. A special work area, for the manufacture and hafting of scrapers, must have been confined in Area III. The most impressive element here is the "cache" of five retouchers. Only two of these thin pebbles had use scars. The remaining three were found intact and probably they represent a reserve for future needs (Bosinski 1995). With respect to caching, two particularly large chalcedony flakes (about 400 and 800 gr) were transported from the Bonn source some 40 km to the north and stored at Niederbieber (to the northwest of Area V) but remained unworked (Baales 2006: 433). Finally, the investigation of the western area of the site exposed numerous new concentrations of materials (Areas VIII – XV Fig 7.10). The smaller and larger concentrations of lithics in this part of the site revealed the use of raw materials, like Tertiary quartzite, siliceous slate (lydite) and silicified tuff, that were either unknown or under-represented in activity Areas I-VII. The majority of these lithic concentrations can be interpreted as knapping and/ or dump sites since they are not linked to hearths and contain only a few modified forms and secondary débitage from backing (Baales and Street 1998).

The overall amount of faunal material is not very great and it is not clear whether all the fauna is contemporaneous or it represents a time depth within the Alleröd. The main species of big game in Niederbieber are red deer and elk and are followed by horse, Bos/ Bison, ibex and chamois, while smaller animals include beaver and red fox. There is evidence that Area IV (and perhaps by association via lithic refits also Area I) was

occupied in autumn or winter, but indicators or seasonality are absent for other parts of the site (Baales and Street 1996).

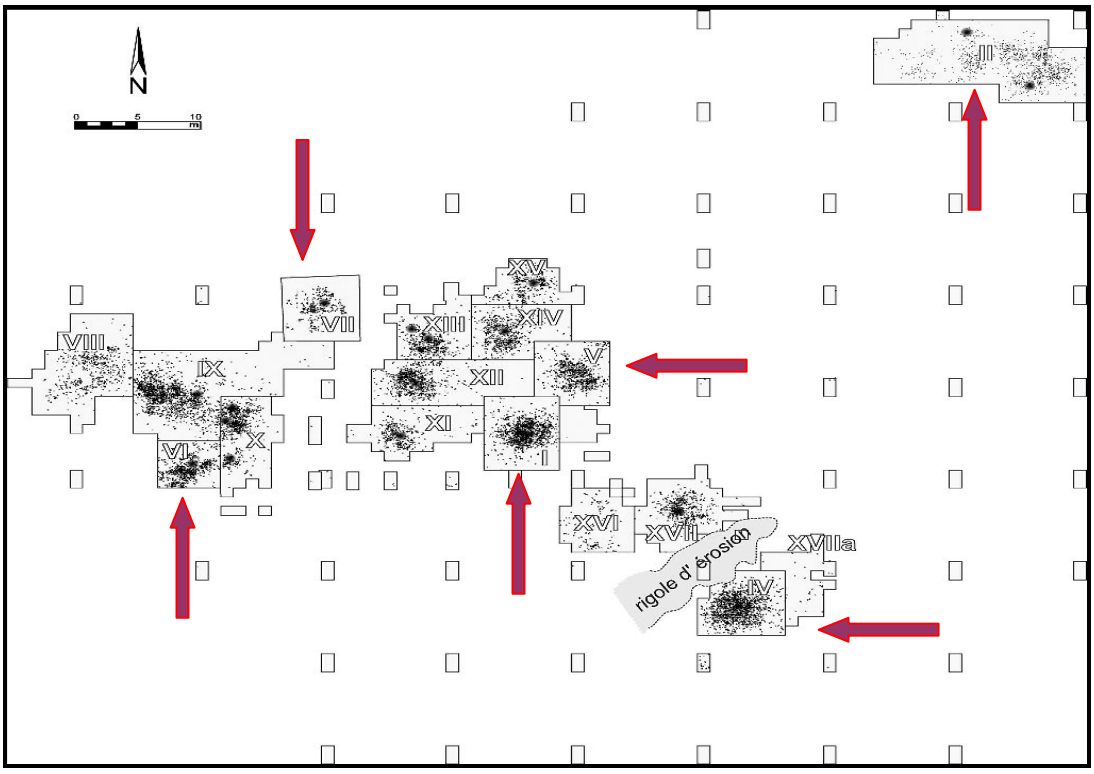


Figure 7.10: Site plan of Niederbieber with the seventeen excavated site features (Street et al. 2006). The purple arrows indicate the areas (I-VII) that are more thoroughly analysed. Area III, situated at the very south of the excavation, is missing from this plan. The black dots are three-dimensionally plotted lithic artefacts

The stone tools in Niederbieber are typical of the Federmesser complex (Fig. 7.11). Short scrapers, mostly made on flakes, outnumber the backed pieces which are typical Federmesser points (curved-backed pieces). Backed bladelets are also common, while burins, borers, and truncated or splintered pieces are less frequent than points and scrapers. The lithic production seems to be relatively simple. There is no visible preference for the production of blades and bladelets and in most cases, the blanks for retouched points were simple flakes (Floss 2000b).

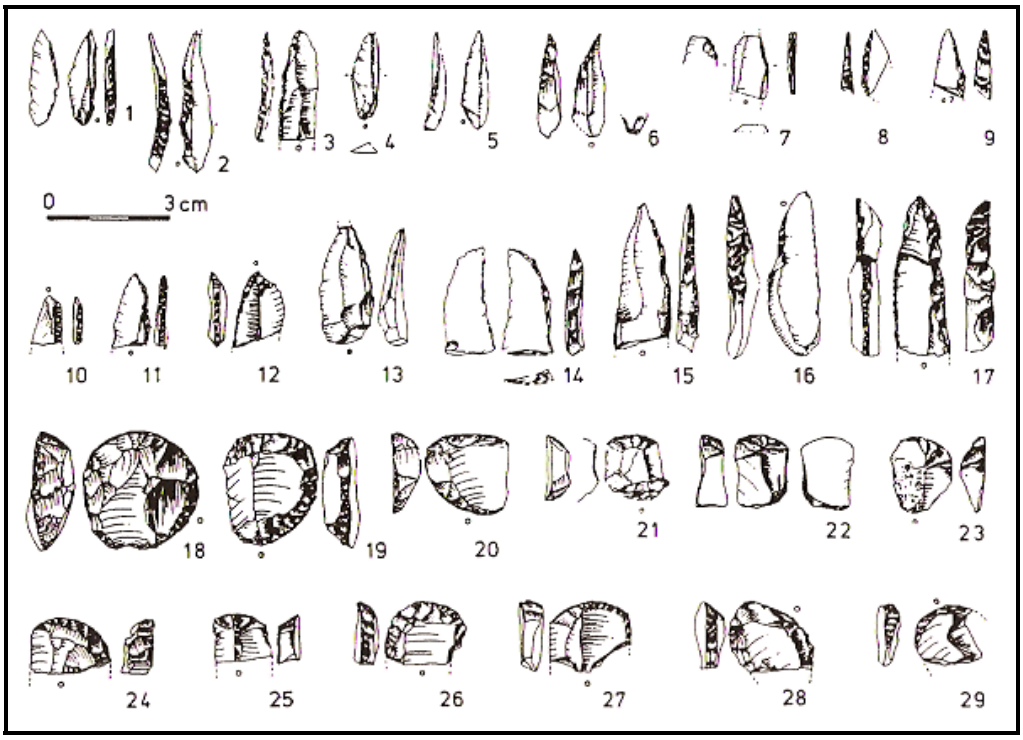


Figure 7.11: Retouched tools from Niederbieber. 1-17 backed points; 18-29 short end scrapers (Street 1997: 559)

The raw materials in the site vary from local to more exotic and they are unevenly distributed to the different excavation areas. Tertiary quartzite and siliceous slate (lydite) from the gravels of the Middle Rhine qualify as local material. The very common chalcedony seems to come from an outcrop near Bonn-Muffendorf, some 50 km to the north. The long distance component, transported from over 100 km, is once again the Baltic and Meuse flint. Chalcedony is dominant in Areas I, III, IV and VI, Tertiary quartzite in Area V, Tertiary Quartzite and Baltic flint in Area VII, and Tertiary Quartzite, Meuse and Baltic flint in Area II. Refits between different concentrations show that Areas I and IV are related, as are Areas I and V (Floss 2000b, 2000). To summarise, the variability in raw materials at different concentration areas indicates either preferential use of one type of raw material (like the dominance of chalcedony in Areas I, III, IV, V and VI) or preference for a diverse spectrum (Areas II and VII). Amongst the homogeneous areas, at least Area IV (46 m^2) and probably Area I (48 m^2) are linked to an autumn/ winter occupation. Whether the heterogeneous larger Area II

(120 m^2) is connected to habitation during the summer months, as is the case at the materially comparable Andernach, is an open possibility (Table 7.9; Street et al. 2006).

Finally, in stark contrast to the Federmessergruppen almost complete absence of art and ornaments, three objects are recovered from Niederbieber that could be classified as such: an engraved small plaque of schist from Area VII, an engraved arrow shaft smoother on sandstone from Area II, and one of the used retouchers from the cache of five from Area III carrying engraved lines (Baales 2006; Bosinski 1995).

	Area I	**Area II**	**Area III**	**Area IV**	**Western surface** (areas VIII-XV)	**Area V**	**Area VI**	**Area VII**
Size	48 m^2	126 m^2	28 m^2	46 m^2	450 m^2 in total			
RM	Ch	TQ MF BF	Ch	Ch	TQ Ch Ly ST	TQ bf	Ch mf tq	BF tq ch
Fauna	Red deer (MNI:3)	Mixed		Red deer (MNI: 4)			Red deer	
Seasonality	Autumn (?)	Summer (??)		Autumn			Autumn?	
Comments	Hearth	Number of hearths. Heterogeneity of RM & fauna reminiscent of Andernach	Work area. Cache of retouchers.	Hearth. Possible tent-like structure.	Many concentrations of various RM, which were less significant in Areas I-VII. Knapping/ dump sites.		Hearth?	

Table7.9: Synopsis of available information on the Niederbieber settlement. RM = Raw Material. Ch = chalcedony; TQ = Tertiary quartzite; MF = Meuse flint; B. = Baltic flint; Ly = lydite (siliceous slate); ST = Silicified tuff. Capital letters indicate dominance of raw material and low case letters show secondary importance in terms of quantity

7.6.3 Urbar

Urbar is located at about 500 m east of the Rhine, to the north of the city of Koblenz. Since its discovery in 1966, several excavation campaigns have only uncovered an area of 17 m^2 because the site is in a small private garden with limited

accessibility (Fig. 7.12). There is only one AMS date from red deer bone (OxA-1137: 11,350 ± 120), which places the occupation of the site in the second half of the Alleröd interstadial. This is at odds with the relative depth of the cultural horizon which might suggest a much earlier occupation (Baales and Street 1996).

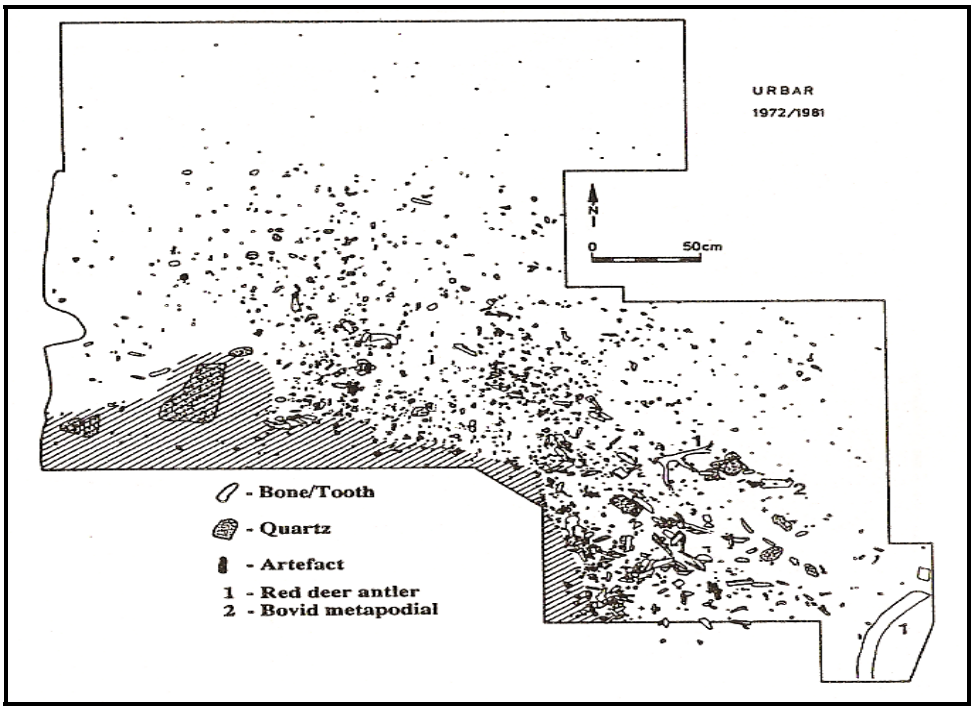


Figure 7.12: Urbar site plan. Distribution of artefacts and bones (Bosinski 1995)

The pumice that had sealed the site originally provided an excellent means of preservation for the faunal material, though after its removal bones deteriorated very quickly. All surviving bones (about 400), teeth and two antler fragments are determined as red deer (MNI = 7), with the single exception of a bovid metacarpal. Tooth eruption and wear patterns indicate that animals of different age were brought to the settlement. The major activity seems to be marrow exploitation, while there is little evidence for *in situ* butchering and no clear indication for seasonality although an autumn/ winter occupation has been suggested (Bosinski 1995; Street 1997).

The lithic assemblage of Urbar (N = 1,464 artefacts) is largely dominated by the local Tertiary quartzite (summary in Table 7.10). Some 145 artefacts are made from

siliceous slate (lydite) and another 31 from Devonian quartzite, with both materials occurring locally in the gravels of the Rhine. Furthermore, there are only two flakes made on exotic Meuse flint (Fig. 7.16). Of the 111 retouched tools, only 12 are manufactured from siliceous slate. The dominant tool type is the end scraper (N=98), mostly of small dimensions. Additionally, there are 13 backed pieces, 2 burins, 2 truncations and another 4 retouched pieces (Bosinski 1995).

RAW MATERIAL COMPOSITION			
Tertiary quartzite	1,286 (87.8 %)		
Lydite	145 (9.9 %)		
Devonian quartzite	31 (2.1 %)		
Meuse flint	2 (0.1 %)		
Artefact Total	**1,464**		
RETOUCHED TOOLS INVENTORY			
Tool Type	**Raw Material**		**Total**
	Tertiary Quartzite	/ Siliceous slate	
Endscraper	91	/ 7	98
Backed Point	7	/ 4	11
Backed Piece	1	/ 1	2
Edge Retouched Piece	1		1
Partially Retouched Piece	1		1
Burin	2		2
Truncation	2		2
Tool Total	**107**	**/ 12**	**119**

Table 7.10: Urbar lithic assemblage

7.6.4 Kettig

Kettig lies 1.5 Km to the south of the Rhine and is the most recently discovered Federmesser site in the Neuwied Basin. During excavation in 1993, a total of 242 m^2 were examined (Fig 7.13). Although it was not possible to identify evident settlement features like dwellings or fireplaces, analysis of the lithic and bone material indirectly revealed the presence of two square hearths in the northeastern sector of the site, at least one of them being situated outdoors. There is one conventional radiocarbon date for the site of 11314 ± 50 BP (Hd- 18123) on bulked bones of red deer (Baales 2001).

Animal bones and teeth point to red deer as being the dominant species, with all the parts of the skeleton, mostly used for marrow extraction, present at the site. A number of remains, especially teeth, allowed the identification of the season of occupation of the site as late summer or early autumn. Other animals include roe deer, horse, large bovid, wolf, beaver and red fox. For the first time at a Federmesser site in the Rhineland, the remains of a brown bear were recovered (Baales 2001).

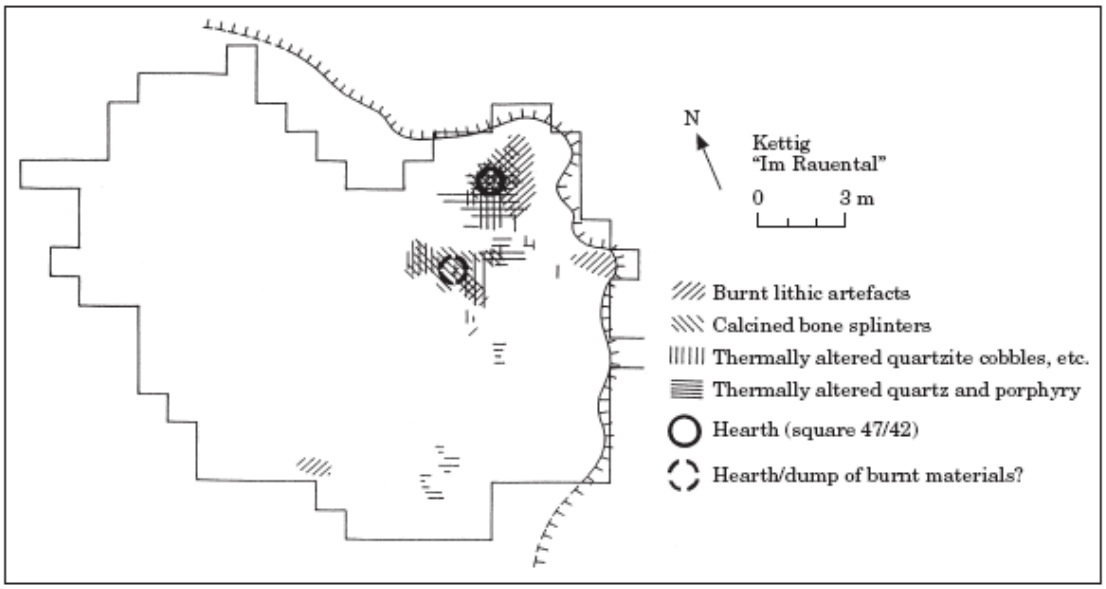


Figure 7.13: Site plan of Kettig with distribution of different burnt materials and location of the two hearths at the northeast of the site (Baales 2001: 137)

Kettig yielded a total of nearly 24,000 lithics (N = 24,098 artefacts, but only 3,834 of them are bigger than one centimetre). The most abundant raw material is Meuse flint (38.1 %), Tertiary quartzite (37.8%) and lydite (18.9%). Chalcedony (1.4%) and Baltic flint (3.6%) are much rarer (Fig. 7.16). Two jasper scrapers must have been transferred as final products from a source some 40 km to the southwest, since no débitage for in situ manufacture was discovered. As is the case with nearby Urbar, the prevailing tool form is the end scraper (N=118) of minute dimensions (Fig. 7.14). This group is followed by about a hundred backed pieces (N=98), which come in a variety of forms: typical, curved backed Federmesser points with a partly curved retouched edge, straight-backed or partly straight- backed points. Bladelets and small flakes with oblique

retouch, similar to Mesolithic microliths are also common in Kettig, as opposed to the rare backed bladelets, burins and borers (Bosinski 1995; Baales 2001).

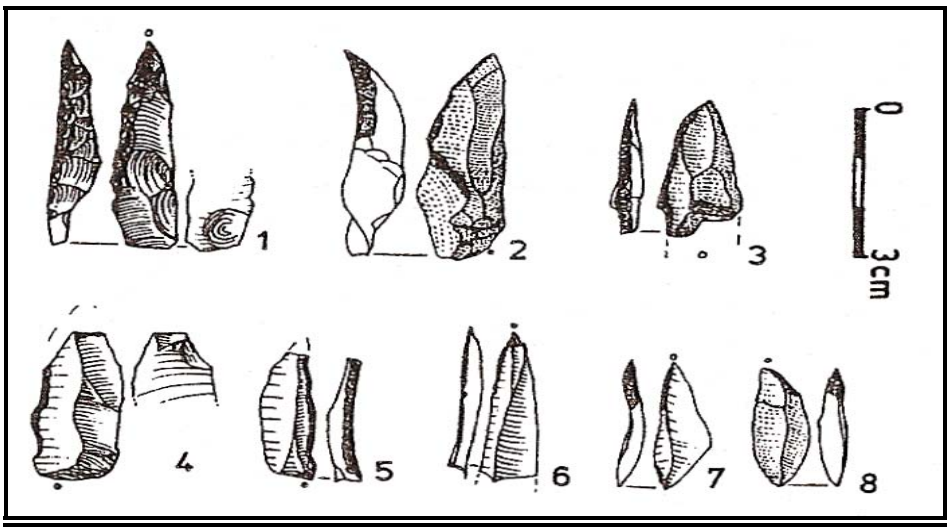


Figure 7.14: Stone tools from Kettig. 1 Federmesser; 2 partially backed point; 3. shouldered point; 4-5 straight backed points (no 5 is fragmented); 6-8 microliths (Bosinski 1995: 926)

Organic artefacts are generally absent from Federmessergruppen contexts in the Middle Rhine region. Nevertheless, at Kettig two artefacts of red deer antler were found. The first one is a fine barbed point constituted from five fragments, three of which could be refitted. The second artefact is a fragment of a shed antler with attached brow tine, possibly used as a soft hammer (percuteur) for the manufacture of stone tools (Baales 2001).

An important parameter of this locality is the detailed spatial analysis that was carried out, which sheds light to its internal organisation and division. Plotting stone tool distribution and refitting studies led to the differentiation of several discrete concentrations of lithics, characterised as either knapping areas or secondary dump zones. The former are mostly located to the north and northeastern parts of the site and are associated with the hearths. The latter represent locations where numerous lithic artefacts knapped elsewhere were discarded. Additionally, evidence from Kettig indicates two closely linked successive phases of occupation. The older stage is expressed by raw materials found either dispersed across the site due to subsequent

human activity (trampling) or in a secondary dump. Conversely, the younger phase is demonstrated by very clearly concentrated artefacts that are still *in situ* where they were knapped or used (Baales 2001).

7.6.5 Bad Breisig, district of Ahrweiler

The site of Bad Breisig is situated a few kilometres to the north of the Neuwied Basin, on the left bank of the Rhine and was investigated during two seasons in 2000 and 2001. Significantly, the archaeological horizon is a pumice-free zone essentially located on top of primary and secondarily disturbed Laacher See deposits. In total, a surface of 50 m^2 was excavated including the remains of a hearth, which was half-destroyed by the commercial exploitation of the gravel. The 2,267 documented lithic artefacts were clearly concentrated in a zone that would correspond to the outline of a small tent. Additionally, the site yielded numerous fragments of burnt and calcinated bones primarily of red deer and to a lesser extent of roe deer. In other words, the faunal element of the site is characteristic of the late Alleröd. In agreement with the late interstadial age (GI-1a) is the only methodologically acceptable date of 10840 ± 60 (GrA-17493) (see section 7.3.1). Once calibrated (12816 ± 84 cal BP) and as is stratigraphically expected, this determination places the site after the Laacher See eruption (12,960 cal BP), before the onset of the Younger Dryas (12,760 cal BP) and therefore definitely within the last 200 years of the Alleröd interstadial (GI-1a).

The lithic assemblage is almost exclusively composed of only two raw material types. Tertiary Quartzite is used overwhelmingly (~90%), while Meuse flint is present by 10%. There is also a presence of less that 1% of lydite. The occurrence of big preparation flakes, long blades and fragments of the raw material are suggestive of the great proximity of the Tertiary Quartzite source to the site.

Despite its small overall size, Bad Breisig produced a total of 136 cores or core fragments, only two of which are of Meuse flint and one of lydite (Fig. 7.16). The retouched tools typically for the Federmesser industry include 40 backed pieces (Fig. 7.14), 70 very small end scrapers, burins (mostly on truncation), distally and laterally

modified pieces, one quartzite retoucher and many hammer stones. Of the backed points, three pieces are of interest because their abrupt basal retouch corresponds to the Malaurie points. These forms are particularly common in the context of late Federmesser (Azilian) industries of France but they remain quite rare in northern European sites (Baales and Jöris 2002).

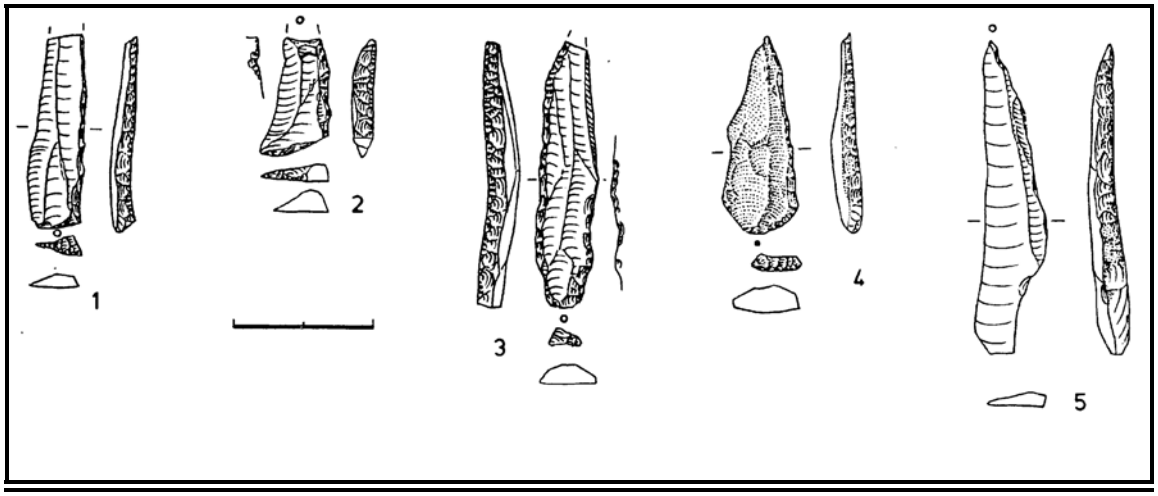


Figure 7.15: Backed points from Bad Breisig. 1-3 Malaurie type points (1 and 2 are basal fragments). 4 Backed point with basal retouch. 5 Point with convex backing (Baales and Jöris 2002)

7.6.6 Synthesis of the occupation during GI 1c-1a

In summary, the archaeology of the period points to a picture fundamentally different to the one of the previous phase in the region and yet it indicates a comparable degree of complexity and effectiveness. Although the five Federmesser settlements in the Neuwied share a great deal of similarities they often differ in many aspects both qualitatively and quantitavely. At close inspection, some general patterns of material culture, mobility, subsistence and spatial organisation emerge.

The fauna corresponds to a milder climate and a more forested landscape. The open grasslands of the GI-1e that supported large herds of migratory herbivores are slowly replaced by progressively more wooded terrains that are habitats to solitary

animals. Faunal remains from certain sites are quite diverse with a variety of species represented by numerous individuals. In any case, the species most commonly present at all sites is the red deer. Minimum numbers of individuals for this species are far higher than for any other (Andernach = 5, Niederbieber I = 3, Niederbieber II = 2, Niederbieber IV = 4, Urbar = 8, Kettig = 8, Bad Breisig = 3) and they show that, in some cases, red deer was preferentially hunted or more frequently encountered (Baales and Street 1996).

In terms of the relatively limited evidence for seasonality, there seems to be two emergent patterns that are associated with the spatial organisation of the sites. When summer or autumn occupation can be attested, it appears to be linked to larger sites with many hearths characterised by a great degree of heterogeneity in lithic raw materials and hunted animals. This is the case of Andernach 2, Niederbieber II and Kettig. By contrast, sites like Niederbieber I and IV, Andernach 3, Urbar and Bad Breisig are dominated by a single raw material type and a favoured animal and the archaeological materials are almost always discretely concentrated around a central hearth. For most of these sites there is enough indication for an autumn/ winter occupation (Street et al. 2006). Despite the clear affinities among the sites of each seasonal/ spatial cluster, there are also important differences: Andernach 2 and Niederbieber II are characterised by backed pieces while Kettig is dominated by scrapers (just like the much smaller in size Urbar). At the same time, Niederbieber I and IV have identical totals of tools, but the proportions of tool types in the former are more balanced. It is evident therefore that the different seasons of occupations at the various sites are not reflected in the composition of the tool spectrum and, by implication, they did not influence the range of activities carried out (Baales and Street 1998).

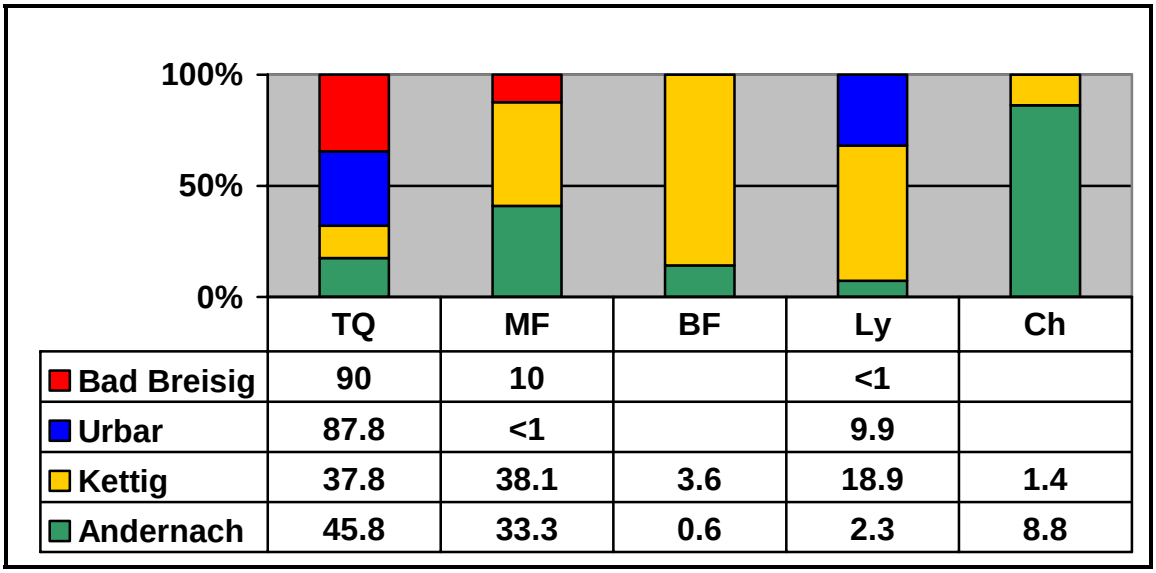
Larger habitation structures, art, ornaments and bone/ antler artefacts are virtually non-existent. The only exceptions are indirect evidence for possible small tent-like structures at Andernach (AN3), Niederbieber (Area IV) and Bad Breisig, a single bone tool from Andernach, an antler hammer and a barbed antler point from Kettig, and two engraved objects from Niederbieber.

In general, the lithic production is non-standardised and of poor overall quality. The façonnage of the Federmesser industries is unsystematic and opportunistic. Laminar production, on both local and exotic raw materials, is most of the times impossible

because of the inadequate morphology of the nodules. The manufacture of blades requires of the original lithic block a regularity of form so as it can be transformed into a prepared core and then into the desired elongated blank. Nevertheless, in Federmesser Neuwied Basin the volumes of raw materials are collected and/ or transported completely unworked, without initial testing or preparation. As a result, the raw material spectrum is much more diversified. For example, the almost 23,000 artefacts of the lower horizon at Andernach are made on only 5 types of raw material, whereas the small assemblage of 2,800 pieces of the upper horizon comprises 13 varieties. In terms of débitage, production is equally random. Blank manufacture is oriented towards flakes, core preparation is marginal and direct hard percussion is the most common knapping technique. Retouched tools are considerably less in amount and inconsistent and variable in their form. Evidently, lithic production was of secondary importance for the hunter-gatherers of this period.

The most typical retouched forms are backed pieces (especially Federmesser points with curved backing) and very short end scrapers. The remainder of the tool inventory (e.g. burins, piercers, distally or laterally retouched flakes and blades, some microliths) plays a secondary role. The wooded landscape, the type of fauna, the presence of a smoother in Niederbieber, the predominance of backed tools and their small size make it seem certain that the hunter-gatherers of the Federmesser groups used the bow and arrow technique. Indirect proof is offered by the hafting residues on five backed pieces from Kettig interpreted as projectile points (Baales and Street 1996: 290).

For the Federmesser of the Neuwied, the use of raw materials is still quite complex. The most frequent types range from local (lydite and Tertiary quartzite), to regional (chalcedony from some 40 km to the north), to exogenous.



	TQ	MF	BF	Ly	Ch
Bad Breisig	90	10		<1	
Urbar	87.8	<1		9.9	
Kettig	37.8	38.1	3.6	18.9	1.4
Andernach	45.8	33.3	0.6	2.3	8.8

Figure 7.16: Composition of most common raw materials at Andernach (upper horizon), Kettig, Urbar and Bad Breisig. TQ = Tertiary quartzite; MF = Meuse flint; BF = Baltic flint; Ly = lydite (siliceous slate); CH = chalcedony. Only lydite seems to be much more common at Kettig. Andernach has a vaster spectrum of raw materials, but the other categories (e.g. siliceous tuff, siliceous oolite, siliceous chalk, quartz, limestone) are represented by small percentages (the total is less than 10%). Data collected from Baales 2001, Floss 2002 and Bosinski 1995. For information on Niederbieber see Table 7.9. The available literature does not provide percentages of raw material types.

Fig. 7.16 shows examples of settlements (Bad Breisig and Urbar) where the lithics are almost exclusively manufactured on a favourite raw material with only one more raw material type being present, as well as examples of assemblages with very varied composition (Kettig and Andernach). It also shows that the local Tertiary Quartzite is omnipresent at quite significant quantities and so is lydite, albeit in lesser amounts. Exogenous materials are by no means rare, although it seems that their acquisition is of secondary importance. In the next section, I will argue that their presence in the first place, especially of Meuse and Baltic flint, is to be attributed to reasons altogether irrelevant from functionality or technological organisation.

Importantly, the distances involved in the procurement of the non-local materials are still comparable to the Magdalenian (Fig. 7.17). In a process familiar from the previous period, more than 100 km to the north and northwest need to be covered for the acquisition of Baltic and Meuse flint respectively. Contacts with the areas south of the Neuwied are realised via jasper pieces at Kettig, travelling some 40 km. Additionally,

silicified oolite and silicified tuff were moved around 100 km from the southeast. More recently, the presence of Triassic chert (Muschelkalkhornstein) and argyle schist (verkieselter Tonstein) at Niedebieber (Areas XVI and XI) confirmed southern contact on an even bigger scale, since these materials originate around 200 km to the southwest of the Neuwied (Baales 2001: 139).

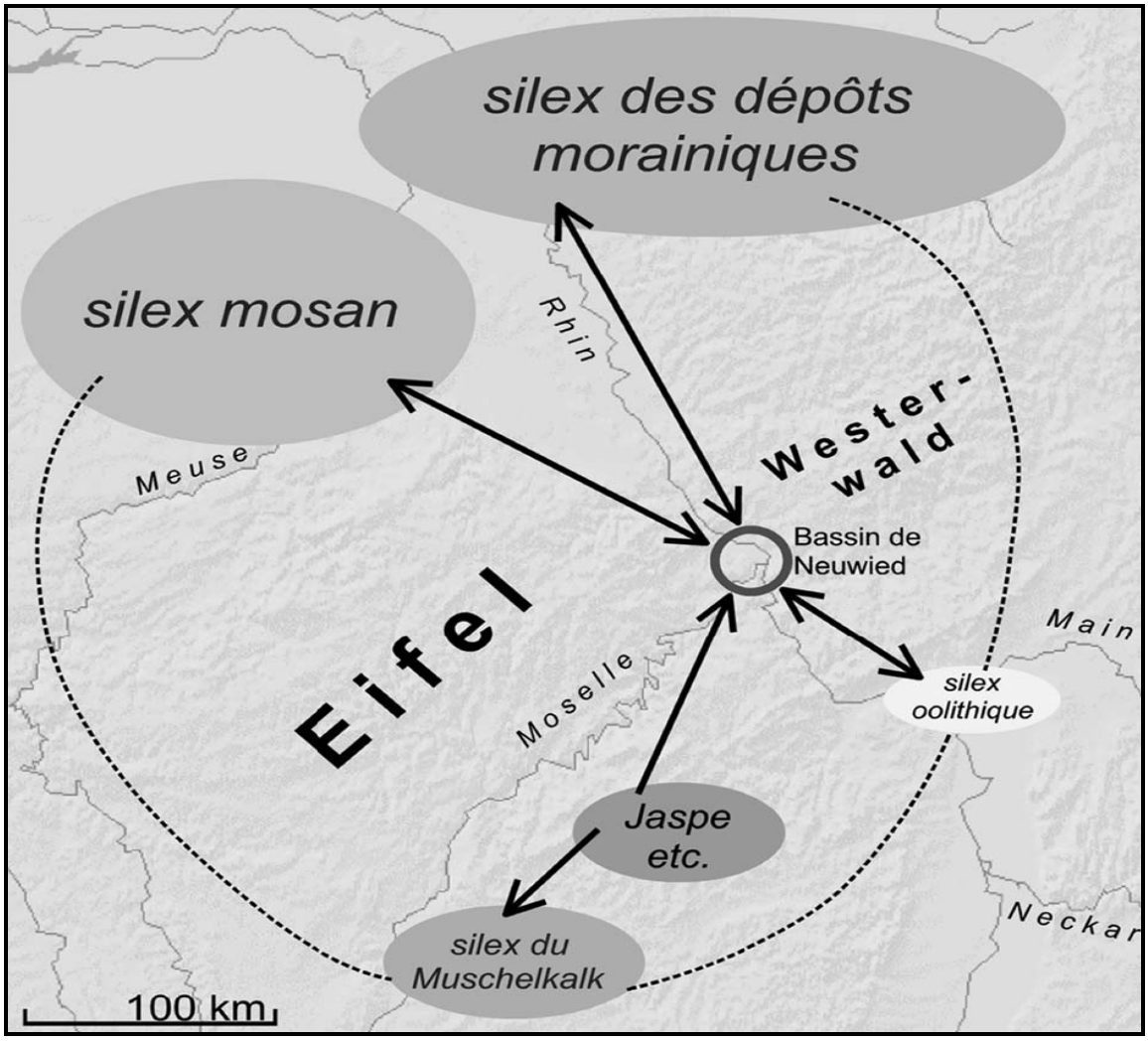


Figure 7.17: Exogenous raw material sources for the Federmesser sites of the Central Rhineland (Baales 2006: 436). Clockwise from top: flint from moraine deposits (Baltic Flint from >100 km to the north), siliceous oolite (from ~100 km to the southeast), jasper (from ~40 km to the southwest), Triassique chert (from ~ 200 km to the southwest), Meuse flint (from >100 km to the northwest)

7.7 IMPLICATIONS FOR PERSONHOOD DURING THE GI-1C-1A OCCUPATION

In Central Rhineland, the use of the substantial in number and some times in size settlements occupied by the Federmesser groups is radically different from the previous period. A rational account starts from the changed environment as the principle factor responsible for variation and follows a chain of cause-and-effect argumentation for explaining every cultural, economic and social aspect of the record. As it was done in section 7.5, the purpose here is to expand this rational view of how Alleröd hunter-gatherers organised their lives and why it is so different from before. Obviously, environmental and ecological constraints shape rational responses and behaviours. But if life is more than the sum of practical decisions, calculated activities, targeted plans and effective outcomes, then the rational approach needs to be expanded by a relational one.

It is generally accepted that the population of the Alleröd existed in an open-forest landscape where big game was more dispersed and available in lower density than in the previous period. The constraining nature of the increasingly wooded habitat and the type of fauna definitely led to a new hunting technique for reasons of efficiency. The inventory of stone tools reflected the emerging need for hafted points to be used as projectiles in conjunction with readily available wood for bows and arrows. In addition, the lack of seasonal access to the securely anticipated resources provided by the migratory herds of large ungulates was definitely a factor for higher population mobility. To suit this short-term presence, Federmesser settlements were less permanent than before. The large evident structures with paved surfaces, hearths and pits have been replaced by loose concentrations of stones and bones that only rarely can be interpreted as small tent-like arrangements. These are the ephemeral settlements of hunter-gatherers who are only present for short visits while exploiting the regional resources. A direct consequence of the changed ecology and subsistence, the material organisation of everyday life reflects the need for an overall tendency for less investment of time and effort. Thus the regularised blade technology that was complimented by organic artefacts, decorative items and art has given way to a non-standardised and non-elaborate lithic production with virtually absent time-requiring artistic expressions.

It is the premise of this work that such cultural changes are in essence social and are determined by the active role individuals play in the shaping of their world. In turn, socio-cultural change determines and is determined by transformations in human identity because in a relational context personal realisation depends on creative interconnections between people and things. As an explanatory platform, social structure takes precedence over behavioural adaptation driven by economic and environmental forces. In short, technology and mobility, being the reflection of such social structure, are different during the Alleröd not because of externally imposed adjustments towards functional efficiency but for reasons of internal social dynamics aiming at social reproduction and/ or change.

The less rigid use of social space in Federmesser settlements and the almost opportunistic lithic raw material procurement suggest a mechanism of human movement similar to residential mobility. Hunter-gatherers of the forest rely on small and quickly exhausted game that may require a frequent change of place. In such circumstances, augmented by the lack of food surplus that would offer some subsistence independence, meat acquisition cannot be very structured and therefore hunting and gathering can only be continuous. As a result, time-consuming activities like organised procurement of raw materials, systematic lithic production resulting in standardised finished forms, and regular retooling of hunting gear is not possible (Floss 1991; 2000b). Evidently, lithic procurement occurs without much previous planning and mainly along the lines of picking up knappable nodules when encountered. Thus, lithic manufacture plays the very specific role of presenting the means to a functional end. As long as Federmesser points are made and their effectiveness as projectiles is secured, little else matters. Uniformity of shape amongst elements of the same set of material culture, conserving this uniformity by repairing and reworking, and creating a stock of tools for future use cannot happen when hunter-gatherers are pressed for time and need to attend to constant food acquiring pressure, while often on the move. This description of life, roughly done in economic terms, is important in providing understandings about behaviours such as modes of movement, spatial organisation and technological patterns. It is also very helpful in comparing and contrasting cultural expressions across geography and through time. In the case of the Central Rhineland this is achieved when categorising similarities

and differences between the two phases of the Lateglacial Interstadial (Table 7.11). Nevertheless, what is often overlooked in such analyses is the social aspect of life, the one that resides in embodied social practice and results in meaningful interconnections that shape, retain or alter social structures and personal materialisations. What follows is an attempt to build on the account that has been proposed for the Alleröd occupation of the Neuwied so far, with the intention to infuse it with knowledge of the more intimate scale of self ontology.

With regard to the Federmesser lithic production, it has to be stressed that the evident non-standardisation is the result of manufacturing processes that are as much social as they were when the outcome was uniform and regularised long blades. In both situations, it is skilled individuals with their practical decisions and habitual actions that are at the heart of the different technical strategies. It has been established that lithic production, like any other type of technology, is socially determined, and that technological change is associated to changes in social life. Hence, the Federmesser industries of the Central Rhineland can only be the material realisation of social interconnections. The adaptive technological character of the artisans of the period prevented the emergence of rigid traditions in the lithic industry. The flexible process and the versatile results indicate a strong preference for consumption. Once brought into the knapping spot, the nodule was used up without much preparation in order to produce blanks and tools suitable for use in more immediate rather than anticipated tasks. As much as fragmentation being inherent in the knapping process, it is the social action of consumption that characterises the typically Federmesser assemblages of the Neuwied. Since bipolar cores, from which long and regular blades can be removed, are absent, blades themselves are rare and the preferential selection for blanks lies with elongated blades (Baales and Street 1996: 292), a picture emerges of a technology that focuses on efficiency and promptness. In such circumstances, quick consumption of nodules/ cores and subsequently of tool supports/ tools gives better results than the following of rigid technical rules aiming at material homogeneity would. The few contrasting instances of some finely worked crested blades and core tablets show that cores were, quite rarely, carefully prepared (*ibid.*). This important observation proves that the population of the Alleröd was not as unskilled or in such a state of technological "degeneration" as is often

presented (Baales 2006: 433). Rather it supports the argument that the embodied actions (*habitus*) of individual knappers agrees with the social practices (more flexible *ad hoc* consumption than regularised fragmentation) that get chosen depending on the situation.

	GI-1e	GI-1c-1a
Hunting	Big herds Spear throwing	Smaller solitary animals Bow and Arrow
Organic Artefacts	Yes	Almost none
Art	Yes	Almost none
Decoration	Yes	Almost none
Mobility	Logistical Occupying large campsites for longer. Seasonal change of place	Residential Frequent change of place
Territory Exploited	100 km to the N 100 km to the NW, 70 km to SE & Mediterranean/ French Atlantic coast	100 km to the N 100 km to the NW, 100 km to the SE 200 km to the SW
Raw Material Acquisition	High quality; transported as worked nodules, prepared cores and finished tools	Randomly collected; random quality; no testing on transported blocks
Lithic Technology	Blade industry, prepared cores, standardisation. Resharpening/ curation	Elongated flakes, rare core preparation, lack of standardisation. Expedient technology
Lithic Typology	Backed blades, burins, scrapers	Federmesser (curved-back) points, small scrapers
Settlement Organisation	Large semi-permanent structures for long repeated visits. Covered areas, paved surfaces, pits, multiple hearths	Small ephemeral structures for short-lived visits. Rare small tents, hearths
Use of Social Space	Spatial differentiation of various activities; existence of partitions dividing space into inside and outside.	Heterogeneous resources, larger diffused areas (= summer/ autumn) Homogeneous resources, small centralised areas (= autumn/ winter)

Table 7.11: Neuwied Basin: broad comparison of general characteristics during the first and the second half of the Lateglacial Interstadial

The rhythm governing mobility is in essence a type of social engagement with the physicality of the landscape. The range of movement of the Federmesser groups of hunter-gatherers is not that different from what it used to be during the previous period. Judging from the exogenous raw materials used, repeated visits to the flint outcrops in the Lower Rhineland (north) and the Meuse (northwest) are equally present in both the Lateglacial interstadials. In section 7.5, it was emphasised that such processes could not be functional. Similarly, the ethology of the hunted Alleröd species (e.g. red deer, roe deer, elk, ibex, chamois; see Table 7.9) suggests the existence of short-range migration and consequently a reliable presence of low density resources at all seasons (Baales and Street 1996: 309). The year-round availability of animal resources to human predation combined with easy accessibility to usable lithic raw materials (fine-grained Tertiary Quartzite and types of siliceous slate (lydite) that can be found throughout the Middle Rhine gravels) negates an obvious subsistence necessity for migrating to far away regions. More importantly, the time and energy invested by the Federmesser groups in covering large geographic distances are not even compensated by the quality of the blocks that get picked and the tools produced. The suggestion here is that the raw material sources, at least in the north and northwest, are areas of particular significance to the hunter-gatherers of the Neuwied. The locations of flint sources are known for many generations and they were visited and re-visited during annual moving cycles for centuries. What seems to be important is not getting hold of a good quality mineral or actually making artefacts out of it. Rather it is the familiarity of the raw material location that drives people to the north and northwest. Places and their underlying connotations are embodied in the materials that originate from there. Consequently, the produced lithic forms are perceived as equally meaningful. When in circulation or once exchanged, these artefacts become themselves bearers of the accumulated meanings and they help produce social networks of people interlinked in common identities. The reconfiguration of the dynamic between people, places and things is part of the social process and the ensuing balance defines hybrid relations. The accumulation of directed visits to long-known places can act as a component of self-identification.

The evidence for accumulation is less clear when considering the additional contacts of the Alleröd groups with the areas to the south of the Neuwied Basin. During

the preceding Bölling, the human movement targeting brown flint had a south-eastern direction towards the Mainz Basin (a distance of ca. 80 km. The Federmesser connections appear to be with slightly more distant regions (ca. 100 km) that are the sources of siliceous oolite. Moreover, a novel field of exploitation is introduced with the procurement of Triassique chert from the southwest. Especially the latter material might prove important for the discussion of mobility ranges and network connections once it gets published along with the detailed information of many of the Niederbieber concentration areas that are still under study. In an attempt to continue the train of thought that led to the interpretation of the movement towards the north as indicative of the practice of accumulation, perhaps an explanation of enchainment could be proposed for the southern expeditions. Since they represent previously unexplored territories that do not carry any memory, meaning or even material association with the past for the people of the Neuwied, may be they could be seen in the same manner that the regions to the north and the northwest were seen in the first place. If the parameters of targeted preference for a raw material, individual agency for interacting with the existing social structure and an embodied habitus of repetitive movement are involved, then mobility towards the south is more enchaining in networks than accumulative in social significance.

An explicit mention is saved for the site of Bad Breisig. Given the fact that this settlement belongs to the final years of the Interstadial, any presence of exogenous raw material must be placed in the context of social life after the Laacher See volcanic eruption. The domination of the lithic assemblage by the local Tertiary Quartzite (90%) is supplemented by a 10% occurrence of Meuse flint. In section 7.5 I had suggested that in the self-sustained Lateglacial Neuwied, the role of social networks with other regions is mainly to secure socio-material enchainment as a means to negotiate fluid human personhood. However, in the face of such a massively catastrophic event, the imported flint may be the only actual example of a social alliance network in action. Although the exact timing of the Bad Breisig occupation after the natural disaster is still unknown (Baales and Jöris 2002), the scenario of a dependence for survival on more distant yet familiar groups is possible. The people of the Neuwied must have fled it immediately after the eruption and perhaps could have existed for a while alongside groups with

whom they already had contacts via the process of acquiring flint. Once on their way back to the Neuwied, the hunter-gatherers could have resided at Bad Breisig (which lies a bit to the north) and since they would not know what to expect they must have carried with them flint to cater for their immediate needs. Once they would get settled at the site, their primary concern for lithic production would be easily fulfilled with the local quartzite.

In the section summarising the Central Rhineland occupation during GI-1c-1a a heuristic model for the use of social space was put forward. According to it, the Federmesser sites can be grouped into two types of spatial organisation that also reflects seasonality. On the one hand, limited areas of concentrations of finds characterised by a largely homogeneous spectrum of resources (lithic raw materials and hunted fauna) and a more or less centralised mode of activity seem to correspond to winter occupation. On the other hand, extensive areas of variable lithics and animal species with a more diffused patterning appear to have been used during the warmer half of the year (Street et al. 2006; Baales 2006). While keeping in mind that this model is yet to be proved, once put within the context of social practice it may suggest two different modes of personal interaction and negotiation. The localities of a more homogenous nature (i.e. Niederbieber I and IV, Andernach 3, Urbar and Bad Breisig) reflect a firm association with particular elements of material culture. Such evidence point towards social entanglement and affirm a type of connectedness through places and things. This social enchainment is counterbalanced by the areas where various and variable resources of mundane life are brought together. The heterogeneous contexts at Andernach 2, Niederbieber II and Kettig echo a strong preference for accumulation as a way for individuals to relate to the materiality of their world.

In conclusion, the people inhabiting the five sites of the Neuwied Basin during the last phase of the Interglacial were both experiencing and expressing a multilayered personhood. They were immersed in a social rather than an adaptive landscape and as active agents of their own meaningful connections they constituted their personhood in a fluid manner. As a consequence, the emerging identity can be at times extended or fragmented. What is of significance is the scale and degree of this multidimensionality. In terms of the social actions involved, the embodied consumption, as evidenced by the

non rigid chaîne opératoire, takes precedence over fragmentation. As for social practice, both its material expressions are to be found. Enchainment however attains a weaker occurrence. The socio-material extension of networked connections, although present, lacks the force that would be given by exchange of goods travelling considerable distances directly with people or being moved through indirect links. Conversely, the accumulation of versatile resources at places and also in directional movement underlies the dual process of self-creation and social negotiation.

7.8 GENERAL SUMMARY AND CONCLUSIONS

The intention of the preceding discussion was to move beyond the site-centred analysis of the previous two chapters. The Lateglacial archaeology of the Central Rhineland enriches the quest for past human personhood with a needed comparative analysis of data from largely contemporary sites in the same region. In other words, the adoption of a supplementary scale of reference produces a description of the site and its context. The goal is for the site not to exist in isolation but for it to be part of a system. The ensuing social analysis confirms and fortifies the potential of investigating the archaeological signatures of the social *practice* of intra-action between the partible human and the material. In short:

- At Hengistbury Head, hunter-gatherers appear to have constructed their personhood primarily via the closeness of the elements that constituted their socio-material reality at the time of their presence at the site. They greatly consumed and fragmented the materials at their disposal with the intention to establish and/ or reiterate their essence by networks of accumulated relationships.
- At Rekem, the multiplicity of the process of becoming a human person surfaces at the various areas within the site. The embodied significance of clearly delineated spaces is located at the core of hybrid relational networks. Different actions of habit resulted at places either in enchained

social relations of (intra-site) exchange or in accumulation of fluid technical actions and material resources.

- In the Neuwied Basin, despite their internal variability, the two sets of sites that correspond to the two phases of the Interstadial point to different expressions of personhood. At Gönnersdorf and Andernach the ways of relating objectify the principle of enchainment through circulation and exchange as well as the process of accumulation that is grounded in the significance of place.
- At Andernach, Niederbieber, Kettig, Urbar and Bad Breisig the picture is more difficult to unify because of the inter-site differentiation. Nevertheless, the over-generalised concept of the emergent person is one of a fluidity founded on the accumulation of all kinds of resources, material and social.

Placed within social archaeological theory, the discussion about past identity and the self centres around the social and embodied nature of technology as a means of negotiating continuity and change. Evidence from lithic manufacture (along with supportive information on spatial organisation, subsistence strategies and mobility patterns) proves that Lateglacial personhood is emerging from a web of relations between people, places and things.

The bi-directional understanding of human-ness and materiality leads to a relational constitution of the world, in the sense of meaningful interaction between people, things and places. Therefore the Lateglacial should not be considered as a fixed chronological and cultural entity but rather a dynamic process. The resulting webs of actual and metaphorical links are the structuring principles of everyday life. Socio-material relations of enchainment and connections of accumulation have as a consequence the emergence of human persons that are more dividuals than individuals.

Finally, the notion of variability within Lateglacial archaeology is one of the implicit themes of the thesis and it has been discussed throughout. The adopted stance has been the consideration of all material culture expressions as fluid and negotiable. Diversity in lithic technology, as well as in raw material acquisition, hunting strategies, habitation duration and settlement organisation, are also founding aspects of the social

arena where hybrid relations of all kinds are played out. Production and consumption patterns of material culture operate as structuring principles in this process. When the patterns change, though never completely unrelated to environmental realities and resulting economic behaviours, it is an indication that the process changes as well. Thus patterns in material culture are generated at the intersection of materiality and sociality. Once considered within the wider context of social practice that underwrites social relationships, variability in form, shape and function translates into different manifestations of relational ontologies. Technology is still a contextual but non-fixed social practice. The case studies of Hengistbury Head, Rekem and the cluster of sites in the Neuwied are a case in point. As for the source of diverse material expressions, this is evidently a question of scale. The primacy of the group as the only viable for the Palaeolithic level of explaining material patterning has been questioned. Instead, the potential was explored to enrich the explanatory unit of the collective with the flexibility inherent in more bottom-up models. Therefore, the crux of this work is the adoption of the smallest scale of reference, that of the individual as the active agent, the knowledgeable actor who is engulfed in the production of social life and as a result he/ she creates multiple ways of becoming a person.

7.9 ASSESMENT, OUTCOMES AND FUTURE RESEARCH

The purpose of this work is to theorise the tangibility of the archaeological record, while at the same time actualizing the abstractness of the creation of the human self. The twin axes of the material and the social are important because the articulation of human personhood resides in the middle of the two discourses. The distributed extension of personhood is achieved by the application of the individual as a reference unit and the chaîne opératoire as an analytical construct. In Palaeolithic archaeology, the former is favoured by network and agency theory and the latter is employed in a lithic production that is embodied and habitual

Instead of producing a reconstruction of an overarching human identity of the Lateglacial interstadial, the thesis elucidates expressions of self ontology at different

times and places: at Hengistbury Head during the first interstadial and at Rekem during the second. A similar result is achieved with the examination of the Central Rhineland sites as a whole spanning the two thousand years of the period. The selected sites were studied with the intention to add a social dimension to the understanding of the human experience of "being". As it was expected the emergent human person differs in its composition not only amongst sites or between periods but, thanks to its fractal dividuality, it may be variable within spatiotemporal units.

The individual as a knowledgeable agent that contributes to its self-realisation by negotiating the social structure is placed at the heart of the analysis. An archaeological model for social practice is adopted with which the emphasis is placed on embodied and relational links between people and their world. Data is recovered by the application of the socio-technical process of the chaîne opératoire and is supplemented by information on mobility, spatial organisation and subsistence. For all the archaeological contexts examined, the result is a multilayered and fluid personhood that fluctuates along the complementary continuum of hybrid relations. Intra-action between the partible human and the material is built on the enchained social exchange and/ or the accumulation of variable socio-material resources. Both of them are equally realised by embodied and habitual fragmentation and/ or consumption performed by individual agents.

In the very first paragraph, I mentioned the relative theoretical paucity of Palaeolithic research in terms of proposing interpretative frameworks which deal with the understanding of the *kinds of actual people* who populated the era. With the hope that this work successfully contributed to that effect, I should mention an inherent danger to such an endeavour. Although ideas about sociality, materiality and personhood may stem from a vast array of disciplines, their incorporation to prehistoric archaeology is by no means a new approach. But what makes their inclusion in the Palaeolithic sphere an interesting challenge is that the resulting interpretations run the risk of appearing simplistic when compared to more recent prehistoric periods. This could be put down to the often patchy, low-resolution record of mere bones and stones that pales in density and detail once juxtaposed to the Neolithic or the Bronze Age reality of agriculture, sedentism, monumentality and material richness. It could also be this

qualitative difference of the archaeological record that underlies the traditional reluctance of Palaeolithic scholars to engage with such ideas.

One of the outcomes of the thesis is that the discussion of the materiality of Lateglacial personhood was carried out through two dissimilar sets of data. On the one hand, Rekem and Hengistbury Head are high resolution sites that represent short-term specialised camps (kill-sites or hunting camps perhaps). Even if they were revisited at times by Lateglacial hunter-gatherers, that was done for brief periods of time for specific and limited activities, and therefore the excavated material is not varying enough to mask the actual function of the sites. They are good for offering information about social practices in the micro-scale like the production, use and social meaning of lithic technology. Under different preservation conditions, Rekem and Hengistbury Head would have been the type of sites that usually prove useful for reconstructing hunting strategies and land use. On the other hand, the set of sites in the Neuwied, with their dense accumulation of cultural material are better suited for yielding insights on social practices and general behaviours. What they lose in fine temporal resolution, they gain in vast informative spectrum. At sites, the multiple occupations and the resulting abundance of data may obscure details of chronology, superimposition and actual function. They do however expand our knowledge about a bulk of palimpsestual activities, as well as mobility patterns, exploitation strategies, social contacts, exchange systems and socio-economic network formation.

Another contribution provided by this research is the suggestion that methodologies and interpretations that incorporate the social practice of the individual should be applied to archaeological data beyond the Lateglacial. The material basis of human identity predates behaviourally modernity. The interaction with and dependence on objects and things is as old as the beginning of the human story. The human self has always been materially mediated because life is experienced in a surrounding material world. Artefacts may have had humble beginnings as mere peripheral instruments and extensions of the body but they did evolve to unequivocal parts of the human essence. As such, the mingling of humans and things is never rigid and firm. On the contrary, the human-material elasticity and context-dependence guarantees a relational human identity. Thus the archaeological materiality that comes before the Final Upper

Palaeolithic can always be approached through its bi-directional interaction with humans who perpetually re-negotiate and re-establish their fluid identities and social relations.

With regards to the research carried out, I feel that I have succeeded in establishing that material culture meanings are fluid and negotiable and that variability in the Lateglacial record of northern Europe is not the result of antithetic adaptive behaviours but rather of relational socio-material practices. I believe however that the thesis would benefit more if it could expand along three axes. Even though these expansions were not sought here because of time and length constraints, they did not compromise the completeness of the present work.

First, I would like to apply the research questions regarding the interconnections of materiality and sociality to a broader chronological context. At the end of the interstadial, the climate dramatically changes once again and during the ca 1100 years of the last Stadial of the Pleistocene (GS-1 or Younger Dryas), the archaeology of northerwestrn Europe shifts to new material expressions (Ahrensburgian or Tanged point Assemblages). As they stand between the terminal Palaeolithic and Mesolithic traditions, they reflect a mixture of older and novel technological traits. It would be worth exploring this amalgamation as a newly emergent social identity for the period.

Secondly, I think a geographical expansion in order to incorporate more regions within the northwestren part of the continent would enrich any future similar endeavour. By opening up the range of the macro-scale, mobility patterns and extended social enchainments would be studied in greater detail. The area north of the Paris Basin and the lowlands towards the North Sea constitute a region of potential great interest.

Finally, I would like to see future work to build on the theoretical issues raised here. By delving into the vast arena of social theory, fresh looks into older discourses can be attained or, even more excitingly, new constructs can be introduced for the interpretation of the Lateglacial record.

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