LAND AND PEOPLE,
NATURE AND KNOWLEDGE

ENVIRONMENT, SUBSISTENCE AND THE SACRED,
IN THE TRANSITION TO FARMING ON EXMOOR

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Abstract

The main subject of the thesis is the transition to agriculture in north-west Europe. The transition is studied primarily from the perspective of Mesolithic hunter-gatherer groups, and the thesis suggests that the significance of Mesolithic cultural practices and religious beliefs in the process has been underestimated. This is because the philosophical basis of many approaches establishes a theoretical division between models of Mesolithic and Neolithic communities both in terms of their respective cultural characteristics, and as a consequence in the way that they are studied. Alternative theoretical approaches that seek to overcome this intellectual division are assessed.

The study then considers ethnographic evidence of modern small-scale, non-industrial societies, concentrating on the relationship between people and the environment, subsistence practices and religious beliefs, and the integration of these factors with the landscape and sacred places. This prompts an analysis of current interpretations of religious beliefs in which it is argued that we may have missed their real significance. The theoretical and ethnographic evidence provides the framework for modelling prehistoric populations, and is then applied to data derived from fieldwork on Exmoor in south-west England.

The evidence from Exmoor is assessed in three parts: the record of the prehistoric environment; changing patterns of lithic raw material use during the transition; and a survey of Exmoor’s unique prehistoric standing stone monuments. All these elements are placed in the context of the transition in the south-west, and more briefly as part of the transformations in north-west Europe. Concentrating on the relationship between land, people, their religious and cultural beliefs, new interpretations emerge of the significance of Neolithic material culture and the role of monuments in the transition to agriculture. It is also suggested that some aspects of the philosophical analysis of religious beliefs may have much wider implications.
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PREFACE AND ACKNOWLEDGEMENTS

There are a number of different conventions used to denote dates in archaeological works, and these can vary between BC, BC, or bp and BP (before present, actually before 1950), the lower case letters denoting uncalibrated radiocarbon dates. The dates used in this thesis have been converted to calibrated radiocarbon dates, for example 3900 cal. BC. The original raw data and uncalibrated dates with laboratory references are also included when quoting original material. The calibrated figures have been derived from tables in the Appendix of Chambers (1993), and the calibration curve in Roberts (1989: 17). Any slight variations that remain should not be considered problematic, as a really high level of accuracy and resolution is not required for this work, which is concerned with broad patterns of changes in cultural beliefs and practice in the transition to farming in north-west Europe.

The origins of the study can perhaps be traced back to my MA dissertation at Leicester in 1994, which had attempted to analyse an intriguing coincidence. It had focussed on a unique concentration of place-names in mid-Devon derived from the word *nemeton*, meaning sacred place. In exactly the same area aerial photography had identified a number of prehistoric ritual monuments, including a large Class II henge at Bow. The possibility of a connection was an challenging one, as all kinds of questions arose concerning the continuity of ritual and belief, and how older sites could be continually used or re-invented to suit the changing ideological needs of different periods. But what interested me, and I could not answer, was why the place or area seemed to have been so important or held sacred in some way originally. That question remained with me, and after a year away from study, I applied to start research into that question. It soon became obvious that I had only scratched the surface. What follows is therefore my attempt to dig a little deeper, and in the process the question has followed directions that I could not have envisaged when I first began.

Much of the first part of the study is concerned with examining the roots of our own forms of knowledge in the Western world, and how despite the undoubted qualities
of our approaches, it is perhaps their very strengths that have allowed us to underestimate other forms of knowledge. These other forms of knowledge include non-Western beliefs, and throughout I have placed much more emphasis on these frameworks than is perhaps usual in archaeological work. I feel that this has helped me look at the remains of our European past in a different way, and has enabled interpretations of places, monuments and the wider context of the transition to agriculture that I could not have contemplated at the start. There always has to be a balance, of course, between other forms of knowledge and what we value for the purposes of research. I hope that the reader will find it worthwhile, because I certainly have done so.

It is said that the best days of your life are at school, but I never believed it then and I do not believe now. For me the best years have undoubtedly been at University, and many influences, both personal and professional, have greatly contributed to the experience, and especially to this study. I would therefore like to take this opportunity of acknowledging the many people who have helped and advised me during the course of this work. I would especially like to thank my supervisors at the School of Archaeological Studies, Professor Graeme Barker and Dr. Rob Young. There has been a valuable contrast in their advice on different aspects of the study. Professor Barker has helped me to prioritise and structure the research, and this has been fundamental to the development of the thesis. He has continually appraised the state of research, and despite my tendency to expand the subject areas, and double the size of chapters, he has been instrumental in regaining a focus and imparting renewed enthusiasm and impetus. This has been a learning experience by itself. Dr. Young has also been of considerable assistance, and I am especially grateful for his time, advice, and the benefit of his experience on all aspects of lithic technology and its analysis. At an early stage in the study, he also advised me to read a number of different books and papers that have had a significant influence on my thinking, and opened up new approaches that I would simply not otherwise have been aware. Although I have not asked his advice as often as I should, he has undoubtedly been a significant influence, and I know that this work has benefited as a consequence.

Much of the research has been carried out in south-west England, and here I would like to thank Veryan Heal, formerly Archaeologist for the Exmoor National Park,
her advice and encouragement. Apart from insightful discussions about the distinctiveness of Exmoor's archaeology, she gave me access to unpublished survey reports, SMR data for Exmoor, and information about ongoing developments and finds. I would also like to thank Veryan, and Vanessa Straker of the University of Bristol, for their time and advice in identifying an area for a small palaeoenvironmental project on Exmoor. Tony Brown of the Department of Geography at Exeter University also provided a background on current palaeoenvironmental research on the moor. I have also benefited from occasional discussions with archaeologist Richard McDonnell and his experience of survey and excavation work on Exmoor, and for letting me help out on a small excavation on Porlock Beach. I would like to thank him and Nigel Hester, Countryside Manager of the National Trust who initiated the work, for providing a copy of the report.

Having worked for the National Trust at Holnicote near Porlock in 1995, I have had many conversations with Isabel Richardson, Archaeologist and Vernacular Buildings Surveyor, about Exmoor, and Devon archaeology. She has kept me informed of many developments, encouraged me to join on-going Trust excavation projects, and allowed participation in a day-school for her archaeological volunteers, in particular one on identifying raw materials and lithic technology in the south-west, which was timely and very useful. Isabel told me of a private flint collection, and I subsequently met Mary White of the Rural Life Museum, Allerford, who kindly arranged for me to analyse and record the collection for the first time. Through Isabel, I have met members of the Tiverton Archaeology Group, especially Barbara Keene, who discussed with me the different raw materials in her lithic collection from east Devon. Barbara’s gazetteer on arrowheads in the south-west has recently been published by the Devon Archaeology Society. Over the last few years Isabel has been instrumental in creating a number of opportunities for developing my knowledge and experience of archaeology, for which I am very grateful, and ultimately this has been of undoubted benefit to the overall progress of the study.

Documentary research was undertaken at the Local History Library, Taunton, and the South West Studies Library, Exeter, and I thank the staff for their help with my requests. Similarly, Chris Webster, Sites and Monuments Records Officer at Somerset County Council twice provided me with a significant volume of printed
records, which were an invaluable guide to little known sites. The National Monuments Records Centre at Swindon promptly provided a copy of a Royal Commission (RCHME) survey on Exmoor’s lithic monuments that proved to be the basis for the fieldwork on Exmoor.

The documentary research was followed by analysis of some lithic collections. I would therefore like to thank Stephen Minnitt and the staff of the Somerset Museums Service at the Castle Museum, Taunton, where most of the research was undertaken, for providing access to the Museum collections. I am also grateful to Alison Mills, of the Museum of North Devon, Barnstaple, for her assistance with all my requests concerning the Kentisbury Down collection.

Much of the land on Exmoor that was visited for this research is open access, or owned and managed by the Exmoor National Park or The National Trust. Some is in private ownership, and I would therefore like to thank the various landowners and farmers who kindly allowed me access to their land: in particular Mark Blathwayt of Porlock Manor Estate, and Oliver Edwards of Westermill Farm, Exford. Most of the fieldwork during the wet summer of 1998 was undertaken on my own, but I was fortunate that a neighbour from Minehead, John Whitsey, had an interest in the archaeology and joined me on many survey days. He found a number of different archaeological features that might otherwise have gone unrecorded, and provided a sceptical and independent opinion on other aspects of the survey. I was also joined on several occasions by Robin Haydon, with whom I have had many agreeable discussions over the years on current theories, politics and philosophy, and which have undoubtedly shaped some aspects of the approach taken here.

Most of all however, I would like to record my thanks to my family, especially my parents, who never questioned the logic of a sudden career change some twelve years ago, but encouraged me to follow my instincts. I owe them both much more than can be written here. Sadly my father died in 1996, but it is true to say that this study would not have been started without his encouragement, or completed without my mother’s constant support and inspiration. The generous financial assistance she has provided has enabled me to continue and complete the research after my award expired. I would therefore like to dedicate this work to my parents.
CHAPTER ONE

INTRODUCTION

It is the mysterious nature, spectacular settings and architecture of prehistoric monuments that first attract us to them. However, in many other ways they remain inaccessible, as static reminders of a remote and distant past. Their very presence poses questions that challenge us to search for answers, and each time the monuments seem to give up their secrets. However, we have learned from experience that these answers may tell us something of the past, but they always reflect our own concerns in the present. As long as we are aware of this unavoidable aspect of present concerns, we can welcome the opportunities and possibilities it provides. Archaeology and the study of the past is not a one way street: if we allow it to, what we learn about the past may also inform us in return.

It is now generally assumed that prehistoric monuments served religious or ritual functions, and were clearly of great significance to the societies who built them. If that is the case, then the places in which they were built were also presumably important. The question that initiated this study was an interest in the factors that determined the location of these monuments. In particular whether there was anything about these locations, that had made the monument sites special or sacred for the people who built them. The second factor that I wanted to assess was also related to the problem of location, and concerned the possibility of continuity of use of sites through prehistory.

The monuments of chief interest to this study were largely constructed during the Neolithic and early Bronze Ages, that in Britain corresponds to approximately 4000 to 1500 cal. BC. Monumental structures of earth and stone are widely found all around the Atlantic fringe of north-west Europe. The monuments had originally been interpreted as the products of the earliest farming societies of these regions. However, more recent archaeological work has suggested the origins of monument construction cannot be linked quite so simply to the activities of early Neolithic
societies, at least not in the way that we understand farming today. It is now clear from the distribution of the monuments in north-west Europe that these were built outside the main areas of known early Neolithic settlement. In fact the general distribution is now considered to reflect the pattern of settlement of the indigenous hunter-gatherer groups, and the monuments may represent their response to the spread of an agricultural way of life. In other words it was probably hunter-gatherer societies in the process of change that constructed the monuments. It would therefore seem that monument played an extremely important role in the transformation of these groups of hunter-gatherers to communities based on herding or agriculture.

The possible identification of the factors that determined the location of these monuments cannot therefore be studied without some understanding of the wider context in which they were built. For example, why did these societies undergoing change build monuments at all, and why in some places and not others? Perhaps one way of approaching the subject is to look at the preceding period in prehistory, that is, the Mesolithic, characterised by a hunter-gatherer way of life, when as far as we can tell, no megalithic monuments were built. However, we need to be aware of the possible use of earlier wooden structures that have simply not survived, as evidenced by the three large post holes dated to the Mesolithic in the car park at Stonehenge (Cleal et al., 1995: 55-6). To approach the problem from this perspective represents a change of emphasis and a reformulation of the question. Instead of asking why were monuments built in particular places in the Neolithic, we can perhaps assess the problem from the perspective of the hunter-gatherers. So we can ask what religious beliefs Mesolithic people may have had, and why they do not seem to have built monuments.

It is clear from the ethnographic evidence of modern hunter-gatherers that they tend to venerate natural features such as rocks or springs, and distinctive landforms. They do not generally build monuments, but ascribe certain sacred qualities to natural features of the landscape. Large constructions do not seem to be considered appropriate to their relationship with the land. If we use this ethnographic evidence as a general basis for modelling Mesolithic hunter-gatherers, and it is an assumption we need to make, how then did this understanding of the land and sacred places change into one that was marked by the construction of spectacular monuments? In
this way we may be able to identify those aspects of change that determined why monuments were built, and in the process why some places were chosen and not others. It may also allow us to trace possible continuity of use of special places in the Mesolithic into later periods. It can be seen that any understanding of the prehistoric context of the monuments involves somewhat wider considerations. In short, the question of why were monuments built in some places and not in others, becomes inextricably tied to a question of when, and for what purpose.

The focus of the enquiry has therefore shifted from an immediate concern with Neolithic monuments to the preceding Mesolithic period, in an attempt to trace the processes of change that led to monument construction. This may look like a rather long way around the problem, but if the monument builders are now seen as hunter-gatherer societies in the process of profound transformations, it makes sense to attempt some understanding of the basic beliefs and practices of Mesolithic societies, before some of these changes occurred. We may then be able to assess the significance of the transformation from a different perspective, and why monuments appear to have been so important.

The next chapter therefore provides the background for the research. I look at the history of different interpretations of the transition to agriculture, in particular the role of Mesolithic hunter-gatherers in the process, and how this has been interpreted by archaeologists. These theories have changed considerably over the years. Early models were profoundly influenced by evolutionary frameworks that saw the Mesolithic as an insignificant stop-gap between the Old Stone Age (Palaeolithic) and the more dynamic farmers of the New Stone Age (Neolithic). As more evidence emerged, largely from anthropological studies, it became clear that hunter-gatherers, and by analogy, Mesolithic societies, needed to be recognised as successful in their own right, and not as representative of ways of life that were impoverished, brutal and short.

I also show that there is a significant division in the approaches used by prehistorians in studying the transition to agriculture, and that this has become quite a distinctive feature over the last thirty years or so. The different assumptions underpinning these approaches obviously tend to determine the type of transition that emerges. This is
not a criticism in itself, as each interpretation has its own strengths and priorities, but the examples do demonstrate that we have often objectified Mesolithic hunter-gatherers by present-day ideas of rational and economic behaviour. For example, Mesolithic societies are often studied in terms of subsistence practices, use of technology, and strategies for efficient adaptation to the environment. In contrast, Neolithic peoples are studied from the perspective of having developed culture and religious beliefs. This division in approaches has been noted for some time, but for this study it presented a difficult problem. As I am concerned with the question of continuity across the transition, I cannot interpret the activities and beliefs of Mesolithic hunter-gatherers by one set of assumptions and appraise the archaeological record of the Neolithic by another. This may be one reason why there is a divide between archaeologists who tend to specialise on Mesolithic or Neolithic studies, with only relatively little overlap between them.

The broadening of the context of study therefore needs to be assessed again. The problem I identify in Chapter Two in the different approaches to the transition to agriculture, is in fact only the archaeological example of a much more important theoretical framework that is foundational to Western philosophy: that is, the dichotomy between nature and culture. This extremely influential body of thought is almost unquestioningly used in many aspects of academic study. In fact the structure of academia is itself predicated on this framework: that is, natural sciences on one hand, and social sciences (or humanities) on the other. It would therefore seem that we are not judging the Mesolithic and Neolithic by the same criteria, and this brings into focus a whole range of other associated problems. For example how we interpret ethnographic evidence, and the relationship between universal characteristics of people and society, and those that are specific to particular historical contexts. The nature-culture framework seems to set these up as contradictory elements.

Despite the undoubted and proven strengths of this approach, its very structure does mitigate against understanding some aspects of the past, in particular the religious beliefs of Mesolithic hunter-gatherers and how these may change during the transition to agriculture. Even present day hunter-gatherer societies have been interpreted as somehow being part of nature and lacking other cultural or even human qualities of agency and free will. In Chapter Three, I therefore look briefly at
the historical roots of this mode of thinking about the world, and argue that we need to move beyond this construction if a more balanced interpretation of the past is to be found. This is largely because the nature:culture framework establishes a distance between humans and the world around us. It is this distance that gives us an 'objective' view of our subject, and the methods deriving from this have served us well in many areas of study. However, it is precisely these strengths that create the problem for studying other aspects of the past, and can sometimes prevent us from modelling the cultural or religious beliefs and practices of Mesolithic hunter-gatherers in ways that fully acknowledge the ethnographic evidence.

Chapter Three therefore looks at alternatives from within the Western tradition that have attempted to overcome the division between humans and the world. This takes us away from theories of knowledge to theories of being, or asking more basic questions about what we are as human beings, and how we perceive our surroundings, before trying to know about other things that may be dependent upon the former. I do not suggest that the evidence I present in any way provide the answers to these questions, which are beyond the boundaries of this study. However, it can help us to think about our own forms of knowledge, our way of thinking about the world, and our relationship to it, which may enable a different appreciation of the ethnographic evidence.

Anthropological studies of small-scale non-industrial societies have been used in archaeology as general models and analogies for European prehistory for many years now. Often, however, they have been characterised, studied, and categorised according to the theoretical assumptions governing Western academic research. Although we have studiously reported different aspects of these societies, many of their deeply held convictions and beliefs have been objectified according to Western standards. In particular, religious beliefs and the relationship of people to the land have not been considered valid knowledge in its own right, but simply the specific mental cultural constructions of the society or group. This leaves the Western assumptions of human:environment relations unquestioned. In Chapter Four I therefore attempt to present the ethnographic evidence in a way that acknowledges the religious and cultural beliefs of these societies as representing forms of
knowledge, not mere beliefs. I concentrate in particular on the way religious beliefs should be seen as an inseparable part of subsistence practices.

A corollary of this is that the hunter-gatherer beliefs of the sacred reality of places and the sacredness of land require a somewhat different understanding from our usual interpretations of religious beliefs. This leads me in Chapter Five to examine how we have studied religion and religious beliefs. This was a somewhat unexpected turn for the study, but was initiated following an assessment of the ethnographic evidence. It turned out to be of central importance for the development of the research. My analysis of how religious beliefs have been studied shows a variety of theories and approaches, but most take the view that religion and religious beliefs are a consequence of particular stresses within society. The other theories of religion and the sacred that I outline differ slightly, and tend to have more in common with the ethnographic accounts. I discuss the relative merits of these approaches.

Having established a framework for interpretation based on a more integrative framework of human:environment relations, and the ethnographic evidence pertaining to religion and the sacred, I then needed to apply it to some archaeological data. The chosen area for fieldwork was Exmoor in south-west England. This has been a largely under-researched area compared to other uplands, yet it has an archaeological resource of distinctive and quite unique prehistoric monuments. Chapters Six, Seven and Eight of the study concentrate on the Exmoor evidence. In Chapter Six I provide a general historical background to the archaeological research on Exmoor, and the state of the available evidence on the monuments. In this respect, I was fortunate because the Royal Commission on Historical Monuments (England) had recently completed a full survey of these somewhat fragile sites. There have only been fairly limited studies of the prehistoric environment on Exmoor, but these findings are assessed in comparison with other palaeoenvironmental evidence from the south-west peninsula, to provide a contemporary context, albeit a somewhat limited one. This provides the essential background to an analysis of the fieldwork data.

The first main subject of study was the evidence of lithics use on Exmoor (Chapter Seven). Again this is limited with no large scale surveys having been carried out, and
being upland country there is only very limited ploughing of the land which would reveal lithic scatters anyway. Therefore most sites are the result of chance finds or reflect the activities of a few collectors. Consequently the distribution of known sites is not an accurate reflection of prehistoric activity, and only more general patterns could be discerned in the data. I concentrate on the use of different raw materials, and how these may or may not change over time. This work, is however, aided by a wider assessment of the pattern of raw material use in the south-west generally, that has provided a broad chronological framework, and this forms the necessary context for the interpretation of the Exmoor evidence. In all, three main sites were recorded or sampled, plus another general collection covering a wider area, augmented by analysis of various minor small sites and finds. This was supported and supplemented by the use of SMR data.

The main focus of the fieldwork, however, has been a survey of the prehistoric standing stone monuments on Exmoor (Chapter Eight). The monument evidence from Exmoor is briefly placed in the wider context of north-west Europe, and in the regional developments of south-west England. I also look at the archaeological evidence of monument studies showing concerns with natural landscape elements. The Exmoor monuments are generally assumed to be of late Neolithic or early Bronze Age date, as interestingly there are no known early Neolithic monuments on the moor. The survey was concerned with specific questions regarding the location of these monuments. These questions were largely informed by the ethnographic evidence and sought to identify the different characteristics of the monument locations, in particular whether there was any demonstrable relationship between the monument sites and the kinds of natural landscape features that are often attributed religious significance in hunter-gatherer societies. I was therefore attempting to find any hunter-gatherer concerns in the site locations, and by implication the question of continuity between the Mesolithic and Neolithic periods on Exmoor. The results tend to suggest that the initial view of these monuments as all being of the same period may not quite be the case, as there may be some chronological variation, and possibly some important differences, in the world views expressed by the choice of monument locations. Some interesting and unexpected patterns also emerged from the survey, in particular concerning the question of factors affecting the exact location of the sites.
In Chapter Nine I bring together the diverse categories of evidence in the study, and beginning with a short summary of the fieldwork findings, I then attempt to integrate the evidence from Exmoor into the wider pattern of changes paralleled in north-west Europe, and more closely in the south-west peninsula of England. I concentrate on a few main themes. These are primarily concerned with the relationship between land and people, that involves an appreciation of both subsistence practices and religious beliefs. I then look at several aspects of this relationship in hunter-gatherer societies, and how this world view was affected by changes wrought by the transition to agriculture, with new forms of material culture and monuments. I end the Discussion chapter with a brief summary of what may be termed the ‘Neolithic world view’. This is not a model of the Neolithic as such, but an attempt to highlight some aspects of the development that may permit new interpretations of the significance of the material culture and beliefs of the early Neolithic. I suggest that the real power inherent in the new forms of material culture has not been fully appreciated to date, because we have not understood the significance and power of hunter-gatherer religious beliefs, latent in the relationship of land and people.

The final chapter provides a summary of the main arguments. I discuss the relative strengths and weaknesses of different parts of the research in relation to the wider theoretical approaches that inform current archaeological practice. It is suggested that, although the study takes a long term view of prehistory and history, and only attempts to identify the major patterns and changes, this does not undermine the main findings of the study. Many current approaches concentrate in detail on particular areas or periods, and although the Mesolithic-Neolithic transition has been the main focus of the research, the theoretical and philosophical findings should, I suggest, have relevance for other periods as well. These primarily concern human relations to the natural environment, and how these are important for understanding religious beliefs. In this final chapter I have therefore attempted to develop the theoretical findings from the study to provide the wider context for understanding this evidence, and to show that it potentially has much wider significance.
CHAPTER TWO

THE RESEARCH CONTEXT

2.1 Introduction
The purpose of this chapter is to set out the wider context of the study, and to identify problems with our current interpretations which it is suggested act as real barriers to our understandings of prehistoric societies and their world views. The first part consists of a brief review of the historical development of archaeological knowledge in relation to what we now term the transition to agriculture, and how our understanding of this important period has changed and evolved over the last 100 years or so. The relative strengths and weaknesses of different methods and approaches will be discussed, as will the assumptions that underpin the resultant models, and how these determine the kind of ‘transition to agriculture’ that emerges. The account will concentrate on the more recent developments, in particular the theoretical discussions in this field over the last fifteen years.

From these debates there has emerged something of a dichotomy in approaches. I suggest that this division handicaps our attempts to understand the nature of the transition, in particular the way in which interpretations of hunter-gatherers have failed to recognise the importance of Mesolithic culture. It is argued that the undervaluing of hunter-gatherer beliefs and culture distorts the resulting models of the nature of the transition. The underlying reason for the theoretical divide is identified as the nature:culture framework, and it is argued that this problem has to be surmounted before a balanced understanding of the nature of the transition to agriculture can be achieved.

2.2 Early frameworks
In 1865 Sir John Lubbock defined the original terms of Palaeolithic and Neolithic, and he used three criteria to separate them. The first was that Neolithic people were contemporary with extant or recently extant animals and plants, whereas their
Palaeolithic ancestors lived at a time of species that were now extinct. Secondly, he defined the subsistence practices of Palaeolithic people as hunting, fishing and foraging, whereas Neolithic people had to some extent domesticated animals and grew cultivated crops. Thirdly he identified technological differences in the archaeological record, for example polished blades and stone axes in the Neolithic and the adoption of pottery, which he saw as lacking in earlier periods.

Although Lubbock was right up to date with his use of the available evidence, the contrast or dichotomy he established between the Palaeolithic and Neolithic prompted the French prehistorians A. and G. de Mortillet to suggest a hiatus in prehistory between these two periods. They identified a further fifteen differences between the Palaeolithic and Neolithic, which created a “veritable chasm” between the two periods (Clark, 1980: 2). However almost at once new evidence began to emerge that demonstrated distinctive typological traits that could not be assigned to either the Palaeolithic or the Neolithic, in particular stratified material between late Magdalenian culture and Neolithic levels in the cave at Mas d’Azil, Ariege. These assemblages came to be classified as post-Palaeolithic and pre-Neolithic, which eventually acquired the shorthand ‘Mesolithic’. The term was first used by Westropp in 1872, but was not however widely adopted until the 1920s and 1930s, and then only reluctantly. It was Burkitt in 1925-6 and later his pupil J.G.D. (Grahame) Clark in 1932 and 1936 who achieved wider acceptance for the term, but it remained the “Cinderella of the Three Age System” and was primarily used as “a term of convenience” (Zvelebil, 1986b: 5). As Grahame Clark was later to comment, British archaeology at this time was still “preoccupied with establishing base chronological sequences” (Clark, 1980: 3).

Archaeological approaches had been largely based on an implicit evolutionary framework, but during the 1920s and 1930s the emphasis changed to a historical and anthropological perspective, which showed that the Three Age System could not be strictly defined as stages in human evolution. The Three Ages were now understood to represent differences of degree in a process of gradual change, although the Mesolithic “retained its low status as a chronological stop-gap” (Zvelebil, 1986b: 6). The low status of the Mesolithic was partly the result of a legacy of Eurocentric evolutionary views and a comparative lack of archaeological evidence. It was largely
then an “impoverished view” (Zvelebil, 1986b: 8), that characterised hunter-gatherers and by implication Mesolithic cultures as mobile, egalitarian and opportunistic, but incapable of manipulating their environment in a meaningful way. Farming was seen as the superior culture, and sedentism, and domestication of animals and plants considered the marks of civilisation and culture.

2.3 Diffusionism and culture history
V.G. Childe used the term ‘cultures’ in 1925, in the *Dawn of European Civilisation*, to describe the archaeological record of the spatial patterning of material culture, and which implicitly, though not always, was used as representing the ‘arrival’ of different peoples or ethnic entities. It was a very influential model for interpreting cultural change, specifically the transition to agriculture and its assumed spread across the continent of Europe. Despite its historical overtones of different peoples and ‘cultures’, Childe was however reluctant to use the term ‘Mesolithic’, and he preferred the term Epi-palaeolithic to describe the ‘posthumous descendants of the Palaeolithic’ (Clark, 1980: 5). Childe’s Marxist ideology preferred to see the evolution of human society moving via a series of jumps or ‘revolutionary stages’, and Childe’s label of the ‘Neolithic Revolution’ to describe the transition to farming may be seen in this context. The origin for this framework lay in the intellectual division of research in the Middle East. Here, two sets of prehistorians working independently but in overlapping geographical areas of the Middle East set out to establish the chronological sequence from the Middle Palaeolithic to the end of the Upper Palaeolithic, that is the end of the hunter-gatherer sequence to the origins of settled communities. The evidence would be revealed by exploring the successive levels of occupation in tell settlements down to the earliest villages, in Palestine the Natufian, and in Kurdistan the Zarzian culture (Braidwood and Howe, 1960). With different sets of archaeologists working either side of the cultural ‘divide’, it was the contrast reflected in the tell evidence that led Childe to proclaim the ‘Neolithic Revolution’. The label stuck, despite evidence to the contrary in the Middle East over the next 30 years which demonstrated a “substantial degree of continuity” (Clark, 1980: 36) between the last hunter-gatherers in the region and early farming settlements. The Neolithic was implicitly understood as primarily an economic phenomenon.
Childe’s ‘diffusionist’ model was based on organising groups of artefacts into types and assemblages. By plotting the geographical distribution and temporal relationships, a “history in terms of the groups of people” who made them could be written (Daniel and Renfrew, 1988:159). In this way the transition to agriculture across the continent, and the origin of megalithic architecture, were identified. But because classification of artefacts was largely based on what constituted ‘similarity’, the similarities tended to be seen as the results of cultural contacts, direct or indirect, which “led almost invariably to diffusionist interpretations” (Daniel and Renfrew, 1988:162).

The same arguments were used to interpret the evidence of monuments, found all around the Atlantic fringe, and some Mediterranean coasts and islands. For many scholars with a background in classics, including Gordon Childe, the diffusion of ‘Oriental civilisation’ from east to west seemed entirely logical, although the resulting cultures were distinctly European. Chronologically this meant that the northern and western European monuments would be later than the Mediterranean examples, as represented by Childe’s idea of ‘Megalithic missionaries’, indicating the spread of religion or people.

The ‘culture history’ model was the dominant paradigm for more than a generation. But the status of the Mesolithic period gradually improved. This was largely due to some spectacular archaeological discoveries, for example at Star Carr, where there was the rare survival of organic materials as well as the usual lithic evidence (Clark, 1954). This represented an opportunity for the integrated use of these strands of evidence, plus environmental information for the reconstructing of prehistoric environments, with impressive results. The role of human beings within the ecosystem (a relatively new concept), had been pioneered by Clark from the 1930s onwards (Clark, 1952). Although at that time he had still adhered to a view that the spread of an agricultural economy “enjoyed an overwhelming competitive advantage over the old” (Clark, 1980: 67), he recognised that the effects and spread of farming had been variable, and were clearly dependent on a range of ecological factors. The loess soils in central Europe were recognised as being particularly favourable for
Neolithic settlement. There was also greater appreciation of the range of hunter-gatherer adaptations and erosion of the legacy of unilinear evolutionary frameworks.

2.4 New foundations

But probably the single most important development in archaeology in the last 50 years has been the introduction of radiocarbon dating methods. The early news of the application of radiocarbon dating to material from prehistoric agricultural communities in central America was described by Glyn Daniel in 1962 as a "tremendous blast of cold wind blowing down the corridors of time", inhabited by prehistorians who had established a fixed view of world prehistory (Daniel and Renfrew, 1988: 96). This was based on the specific origins of agriculture in the Fertile Crescent (Braidwood and Howe, 1960), and the subsequent spread of the Neolithic and the development of civilisation from the Middle East. Whereas in Egypt and the Near East the effect of calibrated radiocarbon dates brought them closer to the traditional historical dates derived from contemporary records of kings and pharaohs, much of European prehistory was turned on its head. For example the Mycenaean origin for Stonehenge was now shown to be entirely wrong, with the latter now seen as much the older, and other megalithic monuments in Brittany significantly older than those in the Mediterranean from which they were supposedly derived (Patton, 1993: 5; Renfrew, 1973).

Other developments were to upset the seemingly cosy world of prehistoric archaeology. The 'New Archaeology' in the 1960s was an attempt by an increasing number of scholars in American and British archaeology to redefine the whole nature of archaeology as a discipline. Taking its lead from anthropology, the new approach was to study the different elements of cultural systems, subsistence, technology, environment and social organisation on their own terms, to reconstruct aspects of prehistoric life and economy as "they once must have been" rather than constructing histories from the artefacts that remain (Daniel and Renfrew, 1988: 164). Forms of reasoning were to be made explicit, combined with a rigour of method and analysis. With these approaches it was hoped archaeologists could actually explain what happened in the past, rather than assemble a historical sequence of past events. The confidence in the methods led to a search for general laws of cultural change and
processes, and to change both the nature of archaeology as a discipline and the kinds of questions that could be asked of the archaeological evidence.

Other influences from American anthropology included cultural evolutionary schemes of bands, tribes, chiefdoms and states, which posited a unilinear model of cultural evolution (Sahlins and Service, 1960). Definitions of ‘food production’ had become synonymous with agriculture, and differentiated from ‘food procurement’ that was applied to gathering and collecting activities of hunter-gatherers. Although this tended to reinforce the division between the two modes of subsistence, other work by Binford (1968) and Flannery (1972) stressing the ecological relationship of people, plants and animals tended to emphasise continuities.

The ‘Palaeoeconomy’ school founded at Cambridge University in 1969 was at the forefront of the ‘New’ approaches and has had a powerful influence on the study of prehistoric archaeology. Its main concerns were with the study of human ‘behaviour’, or rather those aspects of behaviour that could be identified in the archaeological record as having long term significance (Higgs and Jarman 1975: 4). Archaeology as a discipline was seen as having a “unique advantage” in respect of the study of long term change, and secondly only over such time spans could a search for “natural laws governing human behaviour” be realistically attempted (Higgs and Jarman, 1975: 4).

The basic assumption underpinning the ‘palaeoeconomy’ approach was that the “primary human adaptation to the environment is the economy” (Higgs and Jarman, 1975: 4). Concepts used in ethology (the study of animal behaviour) were also considered relevant to the study of human subsistence, including concepts of territory and resource utilisation (Jarman et al., 1972). The primary focus of study was the economy irrespective of whether this was a foraging or agricultural economy. Again these approaches had the effect of stressing continuity across the transition, and suggested that human intervention in plant and animal biology, termed ‘husbandry’, could be traced back to Palaeolithic times (Harris, 1989:13; Higgs, 1972). Subsistence reconstruction lent itself to the use of statistical techniques and quantitative methods, which had wide-ranging implications for the approaches and questions that were asked about the transition to farming. These resulted in a
significant transformation in the interpretations of the agricultural transition. For example the selective culling of red deer questioned the role of Mesolithic populations in management of natural resources (Jarman, 1972). Domestication and the transition to farming were seen as a “continuously developing natural process of great selective value” (Higgs and Jarman, 1972: 13).

One of the other main developments that changed the long held interpretations of the transition was a rehabilitation of the hunter-gatherer. In this context the publication of the ‘Man the Hunter’ symposium papers in 1968 represented a major change of emphasis in the approach and understanding of contemporary and prehistoric hunter-gatherers (Lee and DeVore, 1968). The implicit use of modern economic theory (Formalism) to model the subsistence practices of hunter-gatherers was heavily criticised (Sahlins, 1968). It was argued that hunter-gatherers did not endure a fragile existence on the edge of starvation, but had confidence in their environment because it would meet their needs: the ‘affluent forager’ was born (Sahlins, 1968; 1972). Although since criticised as internally contradictory, it was a historically important contribution (Bird-David, 1992: 27-8). These societies were explained by a “more flexible concept of adaptation as measure of cultural competence” (Zvelebil, 1986b: 6). Hunter-gatherers were seen as successfully adapted to the ecosystem of which they were a part, and it was the “ingenuity” of advanced late prehistoric hunters and the successful way they “adapted to a multiplicity of environments” that assured them a more than adequate way of life (Clark, 1980:102). Ecologically-based studies demonstrated the potential of plant foods in temperate forests and countered the bias of archaeological survival of faunal remains, lithic artefacts, and the cultural bias in which these remains were interpreted as indicative of meat-eating hunters (Clarke, 1976). So how then did domestication occur, and if these late Mesolithic foragers were so capable, why did they ultimately adopt agriculture?

The spread of agriculture and the building of monuments had also tended to be seen as two separate processes, for example in Case’s (1969) model which suggested monuments were the product of period of ‘stable adjustment’ after agricultural communities were well established in new areas. In this respect monuments almost became an ‘optional extra’, the result of an agricultural surplus, and simply a function of an agricultural economy. This raises one of the central paradoxes in the
study of monuments and the transition to agriculture. If monuments were the product of an agricultural surplus, why were monuments found in the areas peripheral to the classic prehistoric farming cultures of Europe, the *Linearbandkeramic* (LBK) settlements (Fig. 2.1), and conversely, why were no signs of agricultural settlements or economic intensification found in areas where the monuments were built? The questions are then, why monuments, and why in these areas and not in others? The difference may well be associated with the different nature of the transition in south-eastern and central Europe compared to the north-west.

### 2.5 Population models and complex foragers
The origins of the spread of agriculture were sometimes sought in models of possible population increase in the Holocene, which it was suggested caused an imbalance between population and resources. If the two major forces, population and the natural environment, were out of balance (ideas based on the theories of the nineteenth century economist Thomas Malthus), then the result would be starvation, or an intensification of resource use and corresponding technological developments, leading to domestication. More people required more food, which in turn initiated greater intensification of natural resources, that led inexorably to food production: that is, agriculture (Cohen, 1977). Agriculture is clearly reduced to a solution to "problems of overpopulation on a global scale" (Gebauer and Price, 1992: 3). Change therefore occurs in order for equilibrium to be maintained. Another example using population dynamics was the 'wave of advance' model of Ammerman and Cavalli-Sforza (1973 and 1984). This simulated population expansion from the Near East, and found it comparable with the spread of farming across Europe, and with patterns of genetic variation in European populations. However the predictions for the pattern and rate of the spread of agriculture across Europe have not been supported by the dating evidence which suggests a "much more punctuated process" (Whittle, 1996: 7).

The spread of the LBK groups in the mid sixth millennium BC was originally interpreted as colonisation through the demographic growth of the communities themselves onto the thinly populated loess soils of the north European Plain. Opinion varies as to the precise nature of these communities, as settlements of large
longhouses suggested sedentary occupation, and slash and burn agriculture, but these have given way to models of more mobile societies based on cattle herding (Whittle, 1996). The sedentary nature of the LBK is now open to doubt, and reflects a realisation of how our own assumptions about what farming communities should look like affect our interpretations. "Those (LBK) longhouses have much to answer for" (Whittle, 1997: 18) (my parenthesis). The LBK culture is, however, strikingly similar over great distances, displaying strong homogeneity from southern Poland and the western Ukraine to eastern France, typified by similar pottery styles and the trapezoidal designs of their longhouses. The archaeological record of these groups is dominated by settlements, as funerary architecture in the form of monuments is almost entirely absent.

However, there may be other scenarios under which population increases could take effect, in particular in examples of increasing sedentism amongst hunter-gatherer societies. Sedentism has been suggested as a factor in 'complex' forager societies, which differ from 'affluent' hunter-gatherers where the affluence is more a measure of material wealth and fecundity of the environment which they inhabit (Hayden, 1994). These hunter-gatherers display a complexity in socio-economic organisation, based on large-scale storage of food. In turn this tends to involve increased sedentism, a social division of labour, exchange, social and economic differentiation in the status of individuals within the group, perhaps associated with greater ceremonial and ritual practices, specifically competitive feasting. Models of complex foragers have tended to suggest that sedentism is a "crucial link in the shift to farming", because of population growth leading to intensification of the use of the surrounding environment (Zvelebil, 1986b: 9).

An example of a complex hunter-gatherer society is the Ertebølle culture of southern Scandinavia, where a foraging way of life continued to be maintained for nearly 1000 years before adopting agriculture despite the close proximity of the LBK to the south. There are cemeteries at Vedbaek and Skateholm, indicative of burial practice, ritual and social differentiation, and investment in fixed resources, for example fish traps, use of a wide range of marine food resources, and perhaps sedentary base camps (Blankholm, 1987; Zvelebil and Rowley-Conwy, 1986). Pottery also appears during the mid-Ertebølle c.4700 BC. But adoption of domesticated plants and
animals is absent until at least 4000-3900 BC, when other aspects of Neolithic material culture are found and the first monuments constructed c.3800BC. But major agricultural expansion and forest clearance do not occur for another 4-500 years (Price and Gebauer, 1992: 105), with the vast majority of megalithic tombs being built during the period 3600-3200 BC. So despite being aware of Neolithic culture, these hunter-gatherers only accepted a few aspects of this culture and maintained their own way of life for a considerable period. The various reasons for the final adoption of agriculture cited above all argue for a form of intensification of one sort or another, and rely on implicit evolutionary modelling, which perhaps fails to acknowledge the specific historical conditions or the role of individuals (Whittle, 1996: 7). For this assessment the interesting fact is that the process involved the building of monuments.

The coastal distribution of late Mesolithic communities and monuments around the Atlantic fringe have been considered more than coincidental. Renfrew (1976) suggested that the conditions along the Atlantic fringe from Portugal to Scandinavia provided a particular set of conditions not found elsewhere. These he identified as the productivity of the coast for Mesolithic groups, ease of communication by boat, and the lack of any possible movement further west when agricultural expansion put territorial pressure on these hunter-gatherers. As the area filled up, a form of territorial marker became necessary. Monuments were built in response to this pressure, although Renfrew saw the origins of the tomb forms deriving from the traditions of the indigenous communities. Renfrew argued that the people who built these tombs to signal their group identity belonged to small segmentary societies. In western France scholars have argued over the origins of spectacular monuments for decades, and finds of Neolithic material in megalithic tombs have meant debates about monuments have also become closely linked with the transition to agriculture (Thorpe, 1999: 58).

Although the history of study above has attempted to show the development of different approaches, some aspects of the transition to farming had simply not been questioned, and despite the variations of emphasis of different models there was common ground on two basic suppositions: firstly that there was in prehistory a recognisable entity called the 'subsistence economy', and secondly that this practice
was fundamental to everything else, that the economy was the “precondition for all aspects of human life” (Thomas, 1991a: 7). Both the traditional culture/historical approach (exemplified by the work of Childe, and latterly Case, 1969), and the work of the Palaeoeconomy school shared and maintained these assumptions in their work, and we have examined in general terms how these ideas and models were used to explain the transition to farming. But I now want to concentrate in particular on the process of change in north-west Europe and the British Isles, and developments in our interpretations of the transition over the last fifteen years or so.

2.6 Recent trends: an emerging dichotomy

Under the traditional culture/history model the ‘Neolithic’ referred to both an “immigrant population and its agricultural economy” (Bradley, 1984: 7). When applied to Britain, Case (1969) suggested colonisation occurred over a relatively short period. Because the initial process of colonisation was extremely arduous, social networks broke down, and traditional material culture was not maintained. Links with the continent were broken, and it was only when a mature mixed farming system and sedentary settlements had been established, and more complex social relationships formed again, that the monuments associated with early farmers would eventually be constructed. Yet the archaeological record of the early Neolithic is dominated by monuments, and a real lack of settlement evidence. The ‘first’ early Neolithic is therefore apparently ‘archaeologically invisible’ (Thomas, 1991a: 8). With this scenario, little consideration was given to the role of the native population of hunter-gatherers, who lose their only role in the (economic) story when the pattern of subsistence is changed (Bradley, 1984: 9). But other evidence points to acculturation. The early Neolithic pottery styles and their distribution are similar to several of the ‘social territories’ of the late Mesolithic. So rather than carving out their settlements within a heavily wooded wilderness devoid of social contacts, early farmers may have more likely formed “alliances along already existing lines” (Bradley, 1984: 12), and these early communities should be seen as an “extension of a continental social and economic system” (Bradley, 1984: 13).

Acculturation and indigenous adaptation rather than colonisation are the interpretations favoured by the Palaeoeconomy school, who have done much to raise
the profile of the role of hunter-gatherers in the transition process. Traditionally the expansion of agriculture across the North European Plain had been characterised as colonisation by expanding farming populations, with the LBK culture choosing to settle on the fertile loess soils of the region. The implications of the traditional colonisation model were that indigenous hunter-gatherer populations were the ‘passive recipients’ of a superior culture, but as a result the introduction of farming is “viewed out of its Mesolithic context “ (Zvelebil, 1986a: 3). As Barker has suggested, the “densities of early agriculturalists seem uniformly low relative to carrying capacities” (Barker, 1985: 251), and the contribution of Mesolithic hunter-gatherers may have been more significant, both in terms of their numbers and their contribution to early farming. In fact the success of the first farming systems, their most “impressive and consistent feature”, is their ability to adapt to the limits and potential of different regions and localities, which “betokens detailed local knowledge” (Barker, 1985: 251). From an ecological and economic perspective the hunter-gatherer groups who occupied the broad Temperate Zone were seen as coping with problems similar to those of Near East populations. But the range of choices offered by the environments of the temperate zone are different, and these north-west European populations may have adapted independently. Domestication in this context forms “one among a number of different pathways towards socio-economic intensification” (Zvelebil, 1986a: 1).

So how did agriculture spread across north-west Europe? Early farming communities did not have any technological advantages over hunter-gatherers, nor would they be able to achieve any greater productivity. The alternative may be selective colonisation, an ecologically-driven model that sees farming first established on the most fertile soils, and being dispersed by different modes of contact with hunter-gatherers occupying the surrounding areas. There are several ways this may occur, for example, through the acquisition of resources and technology, the exchange of goods at the ‘frontier’, and/or the hunter-gatherers destroyed by disease and their areas colonised (see Dennell, 1985). A development of this scenario is Zvelebil and Rowley-Conwy’s (1986) ‘Availability, Substitution and Consolidation’ model, which sees the process of transition taking place over a considerable period of forager-farmer interactions. In the first ‘Availability’ phase, hunter-gatherers are aware of farming, there is some contact, but farming is not adopted. The second ‘Substitution’
phase is divided into two alternatives: first, an internal change with forager groups adding elements of farming to their subsistence strategies; and/or secondly where farmers move in and compete for resources. Both these alternatives represent competition between "two mutually incompatible ways of life" (Zvelebil, 1986b: 12), with the hunting and gathering economy eventually eclipsed by farming in the 'Consolidation' phase, where social and economic structures "mature to hinterland conditions", that is, the same as the primary areas of agricultural practice (Zvelebil, 1986b: 12).

As Zvelebil suggests, the limitations of models that concentrate solely on the economic and biological aspects of the process and its gradual nature, have underestimated the social implications by "neglecting the incompatible elements within it" (Zvelebil, 1986b: 12). However he fails to develop this fundamental observation, and simply suggests that the incompatibility is responsible for the eventual decline of the hunter-gatherer way of life, which again tends to see the foragers as passive victims of a superior economy. If, however, we take the stance that foraging and farming are not just different modes of subsistence, but represent quite different ways of thinking, believing and acting, it may be possible to see delays in the acceptance of agriculture as resulting from differences in ideology, and sets of cultural inhibitions in hunter-gatherer society, which need to be de-legitimised and undermined in order for agriculture to become thinkable, acceptable and practicable. This latter kind of approach about the process has characterised a number of models generally termed 'post-processual', compared to the 'processual' approaches advocated by the 'New Archaeology' of the late 1960s onwards, and practised by the 'Palaeoeconomy' school. The relatively narrow concerns of territory and social organisation have given way to attempts to understand the political and cultural roles that monuments played in prehistoric society, and in particular how they were experienced (Hayman, 1997: 266). These post-processual methods have utilised theories originating in sociology, critical and literary theory, which use language and text as analogies and metaphors for interpreting material culture. But they start from a completely different set of assumptions, and it is this 'social and symbolic' archaeology which has come to challenge some of the more established 'economy' driven models over the last fifteen years or so.
One of the early works was Richard Bradley’s 1984 account of the transition and the subsequent development of British prehistory. He saw it as a bridge with earlier work, and it concentrated on the relationship between society and the subsistence economy. This was an implicitly Marxist based approach which was about “power and its expression” (1984: 4). This again took the ‘subsistence economy’ as the basis for societal change although it criticised those economic interpretations which revealed a “basic environmental determinism” (Bradley, 1984: 2). Bradley (1984) argued that the monuments were part of a process whereby an elite came to power, through control of access to the sacred, masking that control through the communal function of large monuments. Here the role of ideology became much more important, and the monuments were not so much the products of an existing elite, rather part of the process of legitimisation itself, and by which an elite became established.

The ‘economy’ was also criticised as a ‘modernist construction’ by Julian Thomas (1991a), who stated that it forced the past into a economic straightjacket of our own making, and reduced past societies to rational modes of behaviour that could be accurately measured and predicted. Rather, the Neolithic should be seen as an historical event. It could not be pinned down and defined as being the same in all places at all times, as it was “more a process than an object to be grasped and reduced to a series of traits”, even though it managed to maintain an identity (Thomas, 1991a: 12). We had unquestionably assumed for too long that the Neolithic meant a mature mixed farming economy, and a sedentary lifestyle based on permanent settlements. He argued that this was a product of universal assumptions; inappropriate analogies or ‘middle-range theory’, which presumed there were universal laws of behaviour based on animal ethology, which could also be applied to interpret past human behaviour. Rather that we should accept that material culture is like a language (or text), and as a symbolic system, is a part of thought, “not an impression, but an interpretation of reality” (Thomas, 1991a: 4). By likening material culture to a language or text, material culture becomes analogous to communication as a symbolic system, that is, an interpretation. By implication our models cannot tell us the ‘real’ past, but are already an interpretation of an interpretation.
To see Neolithic culture as a symbolic system has implications for understanding the nature of the transition in north-west Europe, and Thomas suggests that the expansion of the Neolithic way of life after 4000 BC towards the Atlantic fringe represented a quite different kind of Neolithic from that which had spread across the North European Plain. The Neolithic could not be identified in piecemeal adoption of Neolithic traits by hunter-gatherers, but rather it was the way in which all the aspects of a cultural system can form a symbolic identity, and function as ways of representing and expressing a quite different way of life from that which preceded it, that is the crucial factor. In the case of the transition to farming, it was the “fundamental division of the universe into the wild and the tame” which created the Neolithic world (Thomas, 1991a: 13). But although the LBK may be seen as primarily an economic development spread by colonisation and restricted in its range by ecological factors, the development of the Neolithic after 4000 BC was due to a quite fundamental transformation in the nature of the Neolithic. By the time the British Isles became part of the Neolithic world, it was a “neolithic which existed largely in the realm of ideas”, but it was this aspect which furthered its spread by acculturation (Thomas, 1991a: 14).

Another discussion of the conceptual world and ideas of wild and tame in the Neolithic was Ian Hodder’s *The Domestication of Europe* (1990). Hodder used a set of concepts, for example the ‘domus’, to symbolise the idea of the house and domestication, which were defined in relation to the wild, or ‘agrios’. These derived from a Palaeolithic attempt to control nature for reasons of social status and prestige. The later development of agriculture is seen as ‘culturing the wild’. The set of binary oppositions which results can be criticised for making too strict a division between nature and culture, and makes a distinction between the practical and symbolic and also the conscious and unconscious, which in Gosden’s view represent present-day categories: it may be more realistic to see these elements as intermingled in a more complex way in the ‘flow of life’ (Gosden, 1994: 161).

Like Thomas’s work, Hodder also puts greater emphasis on the symbolic and ideological aspects of the transition than the practical. In this respect it is representative of theoretical developments in archaeology of the last fifteen to twenty years, for example discussions on the role and status of material culture as text in the
work of Hodder (1988), Tilley (1990, 1991), or landscape as text (Duncan and Duncan, 1988). These approaches have great interpretative strengths, but may be said to represent an internalised view of knowledge, that is they use human constructs, such as language and/or text as a system of metaphors or analogies, which form an extra link in the connection between ourselves and the world, rather than understanding derived from more direct experience and practice. In this sense they represent developments in academic thought in industrial societies of the last 100 years or so, and perhaps reflect what may be called a ‘loss of feel for the world’ (Gosden, 1994: 42).

Such approaches also tend to maximise the power of ideology, often as an attempt to counter the more environmentally-determined models, but Whittle criticises these schemes, and sees ideology, especially of the coercive kind, as less important in a prehistoric landscape with space to avoid such influences (Whittle, 1996: 7). He stresses slow change, and continuity of indigenous ways of life, with a convergence of Mesolithic and Neolithic attitudes and values. There was not a uniform set of beliefs, although there are widespread concerns with time, the sacred and descent. Great regional variability is the modus operandi for the adoption of agriculture. Monuments may represent the evidence of a still nomadic population “coming together in shared activities and projects” (Whittle, 1996: 70), which Gosden has termed ‘mutuality’, the setting up of links between people and communities (Gosden, 1994: 90). Social relationships may have been less rigid than previously thought, with the emphasis on shared values, ideas and social sanctions as forms of control, rather than social structure (Whittle, 1996: 7).

Despite stressing continuity, of the beliefs and values of the Neolithic grounded in those of the Mesolithic, Whittle notes there are fundamental changes to their respective worldviews, and relationship to the natural world. Foragers understood themselves to be part of an “undivided, timeless world, shared by people and the animals which inhabited it” (Whittle, 1996: 360). By contrast the Neolithic represented categorisation and separation (from nature), a new sense of time and new beginnings, with an emphasis on sharing within society and on “relationships with an otherworld” (Whittle, 1996: 360). Whittle’s account incorporates many of the developments in approaches towards the transition over the last fifteen years. His
work attempts a balance between the economic and ecologically-based models and those approaches that give greater significance to social and symbolic elements, for example the role of ideology. Although these two basic approaches have led to something of a division (Whittle's model being the exception), in some ways both have continued the re-habilitation of the role of hunter-gatherers in the transition.

This has been developed further in a more recent work by Richard Bradley. In *The Significance of Monuments* (1998a) Bradley asks the seemingly simple question of why were no monuments built in the Mesolithic, and what is the link between the construction of monuments and the first contacts, and/or use of domesticated plants or animals. The first stage of his answer is an interpretation of a somewhat neglected aspect of the transition, that is the symbolic system of beliefs of Mesolithic hunter-gatherers, and what interpretations may be made of their relationship to the natural world. Unlike Hodder's binary oppositions of wild:tame, and nature:culture, Bradley suggests that Mesolithic people did not consider themselves to be separated from the natural world they inhabited, and that they drew little distinction between themselves and other animals (Bradley, 1998a: 14). Such a posited relationship has significant implications for the acceptance of the concept of domestication and the spread of agriculture. The social and symbolic approach had not really been attempted on Mesolithic data, but Bradley uses the burial evidence from Dragsholm in Zealand, where in 1973 two graves were found next to each other. One was dated to the end of the Mesolithic and the other to the Early Neolithic, and the associated artefacts confirmed these dates (Bradley, 1998a: 22). He then gives five examples of features of Mesolithic Europe which are redolent of symbolic beliefs but which are not connected with food production in any way. These are: the importance of red ochre, the use of 'organic' grave goods, deposition of antlers (usually red deer) with burials, the significance of domestic dogs in mortuary ritual, and the "circulation of isolated human bones" (Bradley, 1998a: 28). Some or all of these features are found in different places around Europe, and they are a recurring phenomenon.

Other supposed Mesolithic features are the built structures, possibly houses, such as those at Lepenski Vir, which Whittle suggests are influenced by contact with local farming groups (Whittle, 1996: 44-6), and some tiny cairns in France. But otherwise such monumental or symbolic structures are extremely rare, and Bradley suggests
that this is something that marks a real difference between Mesolithic hunter-gatherers and the Neolithic world view (Bradley, 1998a: 30). What is also noticeable is that while some of the five elements noted above can be demonstrated to have had their origins in the Upper Palaeolithic, it is noticeable how few of them actually continue into the Neolithic, with the exception of the use of red deer antler at ceremonial monuments (Bradley, 1998a: 24-5). These factors suggest there is a significant difference in the respective world views of hunter-gatherers and farmers, which can be supported by the ethnographic record, and Bradley posits a more "reciprocal relationship" between people and nature in the Mesolithic, as indicated by the evidence of burials in north and north-west Europe (Bradley, 1998a: 33).

What the above evidence suggests is that the adoption of farming was much more complex than simply changing the means of subsistence. In a context where there is considered to be little differentiation between people and nature, the ideology of agriculture which implies the "direct ownership of resources" (Bradley, 1998a: 33) strikes at the heart of the hunter-gatherer relationship to the natural world. Therefore the slow adoption of agriculture in north and north-west Europe despite its proximity to the LBK culture further south, maybe due to a difference in ideology as much as the need to adopt new forms of subsistence because of a changing environment. Until the hunter-gatherers adapted their view of the world, "domestication may have been literally unthinkable" (Bradley, 1998a: 34).

2.7 Discussion
These different interpretations of the Mesolithic–Neolithic transition have not only shown the way that our understanding has changed and become more subtle in its appreciation of the process, but also how the assumptions underlying the respective research methods dictate the kind of Mesolithic or Neolithic that emerges. What has become more apparent in the last 30 years is the development of a divide within the approaches to the transition. This can be characterised as a dichotomy between ecological, economic and environmentally-determined models on one hand and social, symbolic and ideologically-based approaches on the other. Many writers have referred to this problem, which is also about the respective scales of analysis of the models. For example, most of the economic and ecological approaches concentrate
on the role of hunter-gatherers in the process. But many of them, apart from Barker, (1985), do not follow the process into later prehistory. These studies also tend to encompass a wide geographical range. Then there are more general accounts, which use the role of a new ideology, which concentrate on the Neolithic. Here the Mesolithic only receives an opening introductory chapter before the main act to follow, for example, Hodder (1990), and Whittle (1996), and more localised versions such as Thomas (1991a), Tilley (1994), (1996). Bradley (1984), (1993), (1998a), tends to draw examples from a wider area, but he states that the Mesolithic-Neolithic transition has become an “intellectual division which it is hard to bridge”: the Neolithic is also either economy or ideology (Bradley, 1998a: 13).

It is not just the nomenclature of Mesolithic or Neolithic which tends to be interpreted in different ways, as an economy or ideology, but a much more fundamental problem lies beneath these terms. The transition is perhaps a boundary of our own making, as it was identified by Thomas as the “point at which two different and opposed approaches to prehistory and its teaching meet” (Thomas, 1988: 59). Earlier prehistory, up to and including the Mesolithic, are usually researched in terms of how humans adapted to their environment, with the Mesolithic forager characterised as adaptable and flexible to meet these challenges. On the other side of the divide humans are more likely to be studied in terms of their cultural achievements, and are independent “purposive subjects, acting in pursuit of socially-defined goals” (Thomas, 1988: 59). Whittle’s (1996) work attempts to overcome this dichotomy by stressing continuity and the resilience and adaptability of hunter-gatherer ways of life in forming the patterns of movement underlying the early Neolithic (as Thomas, 1991a). In other respects, his model still incorporates the old dichotomy that foragers were united with their world, that is, part of nature, whereas Neolithic people were “more conscious of their separate place in the scheme of things” (Whittle, 1996: 370) (my emphasis). We should be aware however, that the transition may actually mark a real change in these relationships, and we need to differentiate a little more carefully between this possibility and our theoretical assumptions.

What these differences amount to are the meeting at the Mesolithic-Neolithic interface of two different models of humanity, one a part of nature, and the other
acting independently of it. The debate in the Proceedings of the Prehistoric Society in 1991 between Mithen and Thomas encapsulated the differences between these approaches. Mithen advocates an evolutionary ecological approach that concentrates on the decision-making process of individuals in specific social, ecological and historical contexts (Mithen, 1991: 10). His approach assumes that hunter-gatherers exploited the environment in a rational manner. He felt that Thomas misunderstood the fact that because their behaviour was considered rational, it necessarily excluded all emotion and feeling, and the hunter-gatherers so modelled were therefore part of a 'cybernetic wasteland'. Mithen attempts to demonstrate that emotion is an important part of the decision-making process, and rather than being a barrier to rational decisions, "emotions are part of the biological solution to the problem" of surviving in unpredictable environments (Mithen, 1991: 11). Emotions can therefore be seen as essential to rational behaviour, which can be modelled by use of Bayesian statistical methods, which assumes imperfect knowledge on the part of the decision-maker.

Thomas criticises this approach in several ways, not least because it assumes the human being can be considered as part of nature in the same way as other elements of the ecosystem, and that every aspect of human existence automatically has a role to play in survival. These concepts are embodied in "a changeless 'human nature' which is not merely a hopeless simplification but a dangerous misconception" (Thomas, 1991b: 15). He also criticises Mithen's model for the way that emotion is reduced to a function of rationality, and more importantly that the rationality that Mithen assumes is the same 'rationality' upon which prehistoric people based their decisions. Rationality is a historically-specific construction (Thomas, 1991b: 16). He also criticises Mithen's approach for his ahistorical construction of human emotions, by which Mithen empathises with Mesolithic foragers and their emotions when burying their dead. Thomas suggests such emotions need to be relativized and historized, and again may simply be products of recent modes of thought (Thomas, 1991b: 18).

2.8 Conclusion
The chapter has briefly recounted the main developments and thought in the study of the transition to agriculture. I have attempted to show how interpretations of the
Neolithic have changed from a stage of evolutionary development, to the spread of a superior culture, which was then primarily understood in economic terms. Theoretical developments have brought about changes in approaches and focussed attention on prehistoric subsistence and the environment, which in turn have led to greater awareness of hunter-gatherer ways of life. However these were still studied in terms of technology and subsistence practices, and how Mesolithic hunter-gatherers adapted to changing environments. More recently studies have concentrated on symbolism, the use of ideology in prehistoric societies, and the role of monuments. But in turn these approaches have concentrated on the Neolithic. Despite evidence which has shown that the role of indigenous hunter-gatherers of north-west Europe is vitally important to understanding the nature of the transition, the culture and beliefs of Mesolithic communities have not been properly addressed as an integral part of the equation. Why is this?

In some respects the above debate between Mithen and Thomas can be seen as part of an ongoing transformation in approaches between traditional ‘modernist’ and more recent ‘post-modern’ theories of thought, which I would argue have to some extent been working at cross-purposes. The reason that the Mesolithic-Neolithic transition seems to be interpreted in either economic or ideological terms is because it straddles the divide between nature and culture. The debates surrounding the different approaches are actually only the archaeological examples of a much more fundamental division that is deeply embedded in the structure of Western thought. The nature:culture division has been the foundation of Western epistemology since the seventeenth century, but its origins can be traced much further back in European thought (Glacken, 1967). I suggest we need to recognise the implications of this powerful body of thought in many different fields of enquiry, before endeavouring to move beyond this framework. Only then can we approach a subtler model of human-environment relations, and a better understanding of prehistoric societies.
Fig. 2.1 European distribution of monumental tombs of the Atlantic fringe and Linearbandkeramic and related farming cultures. (After Lynch. 1997).
CHAPTER THREE

NATURE AND CULTURE

3.1 Introduction

The aims of the chapter are threefold. The first is to identify the origins of the dualist nature of Western thought that is the root cause of our dichotomy of approaches to the Mesolithic-Neolithic transition. I begin with a brief historical account and background of the Scientific Revolution and Enlightenment, to show how the dualist nature of modern thought arose, and how it has manifested itself almost unconsciously in many different strands of academic thinking. The second concern is to show that there have been parallel developments, rival creations in Western thought, born of the Romantic movement, that have countered the dualist paradigm. In particular these have attempted to shift thinking from epistemology to ontology, that is, from abstract systems of knowledge to questions of being and experience of the world. In other words, I am asking how can we be sure of our systems of knowledge until we understand what we are as human beings in the world? The main question I am concerned with is the relationship of humans to the environment, and the work of Heidegger is reviewed in this context.

Questions of being are closely related to how we perceive the world around us, and the work of Ingold on ‘direct perception’ is assessed and compared with other approaches used in archaeology. These are difficult philosophical problems to confront in archaeology, and indeed in other disciplines, so we should not necessarily expect clear-cut answers, because the nature:culture dichotomy is not just any old paradigm or passing intellectual fashion, it is “the key foundation of modernist epistemology” (Descola and Palsson, 1996:12). Herein lies the third point I wish to make. Although the foundations of the dualist tradition were undermined in the early years of the twentieth century, and we are now more aware of their limitations, such is their utility, that they are still widely applied. It is therefore perhaps useful to see attempts at alternatives in this historical perspective, where new research is still feeling its way. The chapter should be seen in this light. The questions that are asked
here are to enable us to think about the human:environment relationship in different ways, to break down the almost unconscious acceptance of assumptions that lie behind our interpretations of the transition to agriculture. It is also the intention that these approaches provide the basis for new insights and interpretations of the ethnographic evidence of small-scale non-industrial societies to be used later in this work.

3.2 The philosophy of Descartes and the Scientific Revolution

Briefly, I shall now attempt to highlight those elements of the Scientific Revolution and the Enlightenment, the modern world view, which have great significance for understanding the origins of approaches and theoretical stances found in archaeology and anthropology in the present. In this respect a very brief account of the historical background of the evolution of the modern world view from an earlier and quite different medieval perspective is significant and worthwhile here.

Medieval ‘scientists’ based their work on both faith and reason and aimed to understand the meaning and significance of the world rather than attempts to predict and control it: because “faith transcended reason, but was not opposed by it; indeed they enriched each other” (Tarnas, 1996: 188). This was largely due to the religious context within which most research was undertaken, and scientists looked for ‘purpose’ behind phenomena, and questions about God, the soul and ethics were very important (Capra, 1982: 38). The Earth was understood to be the centre of the Universe, indeed the centre of Creation, around which the Sun revolved. This geocentric view was challenged by Copernicus, who presented his hypothesis of a de-centred view of the Earth revolving around the Sun in 1543. Later, the work of Johannes Kepler, who formulated the laws of planetary motion, supported Copernicus’s hypothesis, but the really significant change was brought about by Galileo Galilei, who successfully established the work of Copernicus as a valid theory (Capra, 1982: 39).

But Galileo was important for reasons other than astronomy. He argued that to understand nature we have to learn its language, mathematics, and in order to describe nature mathematically, he argued scientists and philosophers should restrict
themselves to studying those properties of material bodies which could be accurately measured and quantified, such as shapes, numbers and movement. Other things and properties such as colour, sound, taste and smell were considered merely subjective mental projections, and could not therefore be accommodated within science (Capra, 1982: 39). Here we have the origins of the prioritisation of vision above the other senses legitimised as part of scientific method, as “only by means of an exclusively quantitative analysis could science attain certain knowledge of the world” (Tarnas, 1996: 263). The role of human experience in understanding the world is therefore removed from scientific discourse (Capra, 1982: 40).

Other developments included Francis Bacon’s formulation of a clear theory of inductive procedure, whereby knowledge is achieved through experiment, from which are drawn conclusions, that are in turn subject to testing by further experiments. These new attitudes to attaining knowledge themselves created a new self-confidence in human abilities, and which provided the contemporary context for the radically new philosophy of Rene Descartes, primarily a brilliant mathematician influenced by new discoveries in astronomy. At the age of 23, Descartes had an illuminating vision in which he saw a method that would “construct a science of nature about which he could have absolute certainty” (Capra, 1982: 42). The basis of his method and philosophy is radical doubt and analysis. He doubts everything until there is one thing he cannot doubt, which for him was the bedrock of all human knowledge, the awareness of himself as a thinker, expressed as cogito ergo sum: ‘I think, therefore I exist’. It was this “self-defining entity” which doubted “everything except itself” (Tarnas, 1996: 280), which expressed Descartes’ belief that mind was more certain than matter. Unlike other systems of belief, Descartes did not see these elements (mind and matter) as complementary, but rather he “posited both a hierarchy of mind over matter and an absolute separation between them” (Willis, 1990: 247). These two separate realms he termed respectively res cogitans, ‘the thinking thing’ (mind), and res extensa, ‘the extended thing’ (matter). Both were the creation of God, who had created the natural order and made it possible for the mind to recognise that order (Capra, 1982: 45).

For Descartes it was representations of the external world which constituted the mind, and therefore awareness of the outside world was actually awareness of
internal brain states (MacNaughten and Urry, 1998: 110). This would imply a human body cut off from the world, and put people in a position where they could not know whether their internal representations actually represented anything in the external world. But Descartes' answer was a hierarchy of distinctions between the senses: first, a physical sensation of contact with other objects; second, feelings of “hunger, pain, colour”; and third, mental awareness “involving perceptions and judgements of the external world” (MacNaughten and Urry, 1998: 110). All these elements of sensory information are then translated by the mind into mental images. The priority given to sight in this formulation has been one of the foundations of scientific epistemology ever since.

There were also considerable consequences for the other element in Descartes' philosophy, that of the realm of material reality. He continued a transition begun by the astronomical discoveries of changing the way people understood themselves in relation to their surroundings, and his explicit positing of res extensa helped, if not quite concluded, a process of changing the medieval view of nature, from “a life giving force to dead matter, from spirit to machine” (MacNaughten and Urry, 1998: 10). For Descartes the material world was a machine. There was no purpose, no spirit, or soul in matter, it worked according to mechanical laws, and perhaps here he was influenced by the high degree of skill in clockmaking and automata in 17th century Europe (Tarnas, 1996: 278). These mechanical devices he compared to the workings of living organisms: the mechanical system of nature so derived could be explained in terms of its arrangement and movement of its parts.

The mechanistic view of the universe was not, however, completed until Isaac Newton brought his intellect to bear on Kepler’s laws of planetary motion, and Galileo’s work on falling bodies, and combined both to formulate general laws of motion governing all objects in the solar system. The fundamental importance of these ‘laws’ was their universal application, valid everywhere throughout the cosmos, which more than confirmed the Cartesian (Descartes) view of nature, as a huge mechanical system (Capra, 1982: 49). Thus the study of nature changed from looking for patterns indicating divine will, to the study “of how nature is materially constituted”, its laws, and mechanical forces which were to be “described in mathematical or geometrical terms” (MacNaughten and Urry, 1998: 10). As a result
"science replaced religion as pre-eminent intellectual authority" (Tarnas, 1996: 286): the epistemology based on Cartesian dualist construction of divisions between mind:body and nature:culture remained the basis for understanding among the natural sciences for the next 200 years. However, one of the emerging paradoxes, indeed ironies, of these intellectual developments, from Descartes to Newton, Lyell to Darwin, was that as humans were able to separate themselves from, and to rise above nature, in one sense the pre-eminent species on the planet, these findings also resulted in the elimination of the "sense of being anything more than a peripheral and transient accident of material evolution" (Tarnas, 1996: 332).

Discoveries in physics in the early decades of the twentieth century, from electromagnetic fields, radioactivity, relativity and quantum theory, fundamentally altered the whole basis of physicists' understanding of how humans were related to world (Tarnas, 1996: 355-6). The evidence from quantum theory firmly suggests that "science is but a link in the infinite chain of man's argument with nature, and that it cannot simply speak of nature 'in itself'" (Heisenberg, 1970 [1958]: 15) (author's italics) (see also Capra, 1982; Heisenberg, 1959). But despite physics generally being seen as the model for the natural sciences, it is perhaps the scandal of twentieth century academic history that these developments have not filtered through into other disciplines, and molecular biology "has emerged as the standard-bearer for Cartesian dualism" (Willis, 1990: 249). The Cartesian framework therefore remains the dominant mode of thought, and underlies, sometimes unnoticed, many of the modern critiques of its method. Indeed the idea that a body of work or theory can be deconstructed and subject to critique, is itself a product of Cartesian thinking that attempts the "separation of the messy and richly networked character of existence into a definable set of elements" (Thomas, 1996: 12).

There are a number of factors here that have a significant bearing on archaeology generally, and Julian Thomas (1996) has discussed many of the main problems as he sees them, particularly in relation to material culture. However the implications of dualism which concern this study are primarily the relationship between human beings and the environment, including non-human animals, and how the academic structure has also influenced the way non-Western societies and cultures and their beliefs have been interpreted.
3.3 The implications of the modern world view

One of the consequences of the division between mind and matter was that two entirely different methods arose for their respective study. The human body was understood as a machine but with an immortal spirit or soul, and was to be studied by "methods of introspection and logical inference" (Willis, 1990: 247). On the question of humanity, Descartes' approach was to begin by identifying those attributes of other animals, and then decide how humans differed from them. As he posited animals to be constituted of matter, unthinking, unfeeling mechanical beings, and as the human body was similar to the bodies of other animals, it implied that the only area of difference would be that "intangible sphere mysteriously connected with neurological activity" (Thomas, 1996: 16), the mind or soul. Human beings were therefore composed of both physical matter and its extension in space, res extensa, and mind, characterised by thought and spirit. Human beings are consequently "both of the world and otherworldly, physical and metaphysical" (Thomas, 1996: 14).

Non-human animals, however, were not considered to have mind, and were composed entirely of unthinking, unfeeling, mechanical matter. This material reality, or matter, was studied by reduction to its material components, observing the causal interactions between them, and arranging the results of observations in a logical order. By separating various elements into categories, not only does it allow us to observe their different characteristics, it also, importantly, allows us to value different categories in various ways. Entities once separated can then be demonstrated to be of a different kind from each other, or be shown to be more fundamental than another. In this way a hierarchy of structure can be established, and the same principle applied in different ways, for example that of "economic base and cultural superstructure, unconscious and conscious self, essence and substance" (Thomas, 1996: 13). The priority and valuing of different senses mean that those which cannot be modelled mathematically are considered secondary senses, subjective experiences, and illusions, but it is these senses which give us our most immediate experiences of nature (Bortoft, 1985: 292). In contrast, the primary qualities of number, magnitude and position, which can be expressed mathematically are the only ones considered to be real. Differential values can be taken further to
include other combinations of relationships, such as the primacy of vision above the other senses, the separation of the human from non-human, the active from the passive, and dominant or dominated, or global and local (Ingold, 1993; Thomas, 1996: 13).

3.4 Humans and nature

In many respects the 'Scientific revolution' and the Enlightenment mark a significant change in the general understanding people had in their relationship to nature. This is very evident in the work of Francis Bacon, which shows a dramatic change from an earlier medieval view of the natural world as part of the divine order, and significantly, female, associated with fertility. For Bacon, nature was something wild, to be tamed, 'bound into service' and made a 'slave'. Although Bacon has perhaps been somewhat unfairly blamed for this change, he may have been influenced by contemporary witchcraft trials and the torture of women, but his work seems to mark the beginning of a patriarchal attitude in scientific thought. Nature, formerly seen as a 'nurturing mother' was, "radically transformed" by Bacon, and was lost entirely in the construction of the world machine of Descartes and Newton (Capra, 1982: 40). The older medieval understanding of the inclusion of people within nature meant something quite different: having a place in the world implied nature had a role to play, a purpose. By knowing the world and their place in it, people would discover their relation to God (Williams, 1972: 153). But this relationship also had implications for the way the natural world was utilised, as it "produced a quite considerable tension concerning the appropriate limits of physical inquiry and thus of human ethical action" (MacNaughten and Urry, 1998: 9). Awareness of this tension is evidenced in the writings of Classical authors on the process of domestication, which was understood as having proceeded through several stages, and represented a loss of innocence from a former Golden Age, in which the earth provided abundantly without labour (Glacken, 1967: 133). The division between wild and domesticated was therefore well established in antiquity. A consequence of this view was a legacy of belief in the efficacy of the natural order of things, supported by religious beliefs that saw interference in the natural world as an unnecessary evil (Glacken, 1967: 135). The separation of humans from nature in the modern era stripped the latter of its numinosity and life-giving role in human affairs,
and it became a machine. As a consequence the new nature-human relationship sanctioned the removal of the old cultural restraints, and thereby legitimised the manipulation and exploitation of the natural world in western culture (Capra, 1982: 46). The absolute break between humans and the rest of the natural world posited by Descartes, and the universal application of the laws of nature working as a huge machine by Newton, effectively disenfranchised the rest of the natural world, “clearing the way very satisfactorily for the uninhibited exercise of human rule” (Thomas, 1983: 34-5).

The idea that nature was there to be used, and that human progress could be measured by the rate at which nature could be subdued and dominated into a “realm of unfreedom”, assumed a doctrine of human exceptionalism (MacNaughten and Urry, 1998: 7). That humans were seen as superior to all other species, and could determine their own destinies uninhibited by moral obligations to other species, presented the world as one of opportunities waiting to be grasped. But before any questions about intervention in the natural world and ethical implications of that action arise, there has to be a prior assumption that humans are separate from and superior to, their environment (Williams, 1972: 154). The philosophy of Descartes provided that justification.

However, such a construction did not necessarily apply to all humans. The principles of the philosophy were extended by analogy to legitimise and justify responses to all manner of contemporary problems. As the scientific understanding of the natural world progressed, these became linked to social developments, which were based on the ability to dominate nature (Thomas, 1996: 15). This ability, or human culture, was increasingly seen as corresponding to the human characteristic of the mind or soul; the subjugation of nature was seen as a product of the realm of human ideas, and as such, natural. By creating nature as ‘other’, an object of study, man in effect ‘makes’ culture, and “insofar as this is true can also stand outside his own ‘nature’” (Strathem, 1980: 177). Consequently, those human populations who did not manifestly control their environment were understood as lacking culture, and could therefore by analogy be said not to be true humans. These attitudes perhaps could be said to have reached their peak in the nineteenth century, not without criticism, but had been a strengthening process throughout the previous 200 years. The
colonisation of the globe by mainly western European powers, initially seen as opportunities to expand trade and spread the word of God, brought in its wake the implications of the Cartesian dualist philosophy. The analogy of Nature as a passive background, inert, unfeeling, with native peoples’ supposed lack of culture seen as part of this analogy, understood as non-subjects and perhaps non-human, was the significant factor in justifying the slave trade, racial oppression and the view of indigenous peoples as more ‘naturally’ suited to particular types of (manual, non-thinking) work. In time, from an academic viewpoint, indigenous peoples came to be understood as part of nature, and like past societies and cultures, were situated away from the centres of science and reason, and could therefore be studied scientifically as objects (Willis, 1990: 248). The role of science as a philosophical principle and strict methodology also aided the legitimisation of subjects such as anthropology and archaeology as ‘proper’ subjects in their own right, although the process took a different course in each subject.

The present-day natural and social sciences no longer entertain the old nineteenth century attitudes, but the dualist construction has still underpinned many assumptions. In the social sciences, the dualist dichotomy, which in one respect treats “the human as a species of animal” (nature, matter), and alternatively “humanity as a condition opposed to animality” (culture, mind/spirit), has long been an integral contradiction which plays “havoc” with thinking, especially in anthropology and archaeology (Ingold, 1994: xx) (Fig. 3.1). The ultimate development of this dualist thinking is, for example, the model of ‘optimal foraging strategy’ applied to the study of ‘primitive’ hunter-gatherers. As human animals, and part of nature (matter), hunter-gatherers are supposed unthinkingly to follow strategies that maximise the efficiency of the food quest, as they are intrinsically and inseparably part of the natural world they inhabit. Such an approach was originally designed to study non-human animals (ethology), and how they survived without a developed faculty for reasoning (mind), but nevertheless had rational strategies for survival. But because hunter-gatherers are also human beings, they are therefore expected to be capable of demonstrating reasoned thought (mind) (Ingold, 1994: xxi). By including these contradictory approaches of two different versions of humanity, the model of ‘optimal foraging strategy’ has achieved a “miraculous synthesis between neo-Darwinian biology and neo-classical economics” (Ingold, 1994: xxi) (Fig. 3.2).
However it has remained quite widely used, for example by Winterhalder and Smith (1981), and Mithen (1990, 1991).

These dichotomies, however, have also been used in deliberately contradictory ways in order to demonstrate differences between societies, and/or posited in the form of binary oppositions as an analytical tool, such as the difference between foraging for food (collection) and food production. The former is associated with hunter-gatherers and non-human foragers, and is “termed interaction in nature”, whereas food production which is common to human pastoralists and agriculturalists is interpreted as “planned intervention in nature” (Ingold, 1994: xxi). The latter activity can only be achieved by the establishment of a position of domination and control over the natural world, which by implication the human forager is supposed to lack (Ingold, 1994: xxi). Therefore ‘production’ by pastoralists and agriculturalists represents the concept of domestication. These two examples indicate some of the powerful modes of thought that still dominate Western academic discourse, and I suggest are a barrier to a fuller understanding of what are a quite complex set of interrelationships.

3.5 The division revealed

As can be seen from these various examples, the whole idea of the Mesolithic-Neolithic transition is built on this dualist framework. Mesolithic hunter-gatherers (nature) are contrasted with Neolithic farmers (culture). The former interact with nature through foraging, the latter intervene in nature by producing food, which is interpreted as domestication, and would appear to be a direct corollary of the nature:culture dichotomy. Therefore, the Mesolithic-Neolithic transition embodies, is predicated on, and is a product of, the nature:culture and mind:body dichotomy that goes to the heart of the Enlightenment project and the dualistic philosophy of Rene Descartes. Even recent models that have attempted to stress continuity and the inadequacies of the nomenclature have still incorporated much the same underlying structure (for example: Hodder, 1990; Whittle, 1996; Bradley, 1998a). Only Julian Thomas’ recent work (1996) has fully engaged the problem of Cartesian dualism with his use of the philosophy of Martin Heidegger, although there are also problems with the work of Heidegger. Otherwise archaeology as a discipline remains divided along these fault lines. As Thomas notes, the primary form of evidence with which
archaeologists attempt to reconstruct past human societies and economies, material culture, incorporates both the physical (material), and the mental (culture). No wonder we are “bedevilled by this opposition” at the core of our object of study (Thomas, 1996: 11).

The wider division of academic structure into natural sciences and social sciences (humanities), is also a direct consequence of the mind:body and nature:culture dualist philosophy of Descartes. Therefore, the philosophical assumptions are already foundational to the establishment of these areas as a subject for study in the first place. But the understanding that has developed is that these subjects and their division into natural and social sciences are there because they have been discovered by science “rather than objects which have been produced by discourse”, and as such are the product of a particular way of thinking about the world, and therefore historically-specific constructions (Thomas, 1996: 12). Because there is an in-built division between the spheres of academic knowledge, the two are always somewhat in tension and potentially antagonistic, yet also because they work from different starting points, one based on the material world, the other mental constructions of it, the debates concerning the primacy of one or the other, are to some extent at cross purposes. However, both approaches tend to see nature as passive, and “dominated either by science or culture” respectively (Thomas, 1996:15). It is this general consensus with which this study wishes to take issue.

The methods we use to understand our surroundings are based on the primacy of objectivity over subjectivity. The former is achieved by creating a physical or abstract distance between the self and the object of study. This method dominates the natural sciences. But the objectivity of science is also limited, in the sense that the scientist is answering his own questions, and this circularity often goes unnoticed because the scientist “believes he hears the voice of ‘nature’ speaking, not realizing that it is the transposed echo of his own voice” (Bortoft, 1985: 292). Subjectivity has a place in the social sciences as a way of attempting to locate the experience of human subjects in their contemporary lifeworld. But these experiences are always interpreted as purely mental constructions pertaining to the specific contexts of the individual involved. There is no acknowledgement of the role of the natural world as anything more than the passive background to human experience. It remains
detached, an external environment, an outside world, with humanity alienated from the earth (Thomas, 1996: 12).

There is perhaps a danger that any alternative to established practice is seen as a romantic attempt to get 'back to nature', as an escape from the harsh realities of an insecure, contemporary industrialised world. But we need to recognise that the 'romantic' and aesthetic sentiments of an idealised Nature are themselves products of the process of separation from the world. With the rise of science, claiming knowledge over the external world, Romanticism lost its early feelings of instinctive unity with nature, and gradually overcome by a sense of alienation, turned inward, to subjective, indulgent, aestheticised views of external nature (Tarnas, 1996: 375-8). Our language betrays this separation. Both the terms 'environment' and 'globe' are products of relatively recent ways of thinking, and “far from marking humanity’s reintegration into the world, signal the culmination of a process of separation” from it (Ingold, 1993: 31). Again an understanding of this position is perhaps best achieved from an historical perspective.

3.6 The creation of a ‘gap’ and the problems of distance
Between 1500 and 1700 the foundations of the modern world view were laid down. But what had existed before this period? What had been replaced, and does the earlier model of the earth and cosmos and humanity’s relationship to it, help us understand the context of our own position, and potentially aid a better understanding of earlier prehistoric beliefs? The medieval concept of the cosmos was vertical, that is the earth was the lowest place in the celestial hierarchy. To the medieval mind the stars in the heavens were not so much “at a great distance as at a great height” (Tuan, 1974: 134). The universe was finite, and experienced from within, in one example comprised of a series of concentric spheres. The spheres were believed to be transparent, and could not be seen, but could be heard, by listening, as they revolved around the common centre (Ingold, 1993: 33). Like early astronomical models, man or humanity was perceived to be located at the centre, and as he gained knowledge of the world around him, would be drawn ever outward, through the concentric spheres, so discovering a step by step knowledge of the universe (Ingold, 1993: 32-3). Another important corollary of this vision is that the ‘vertical’ model of the universe
“signifies transcendence and a particular notion of time” (Tuan, 1974: 129). Strangely, to us, it would seem that a vertical cosmos also corresponds to a “cyclical conception of time” and a particular view of human nature, which is polarised between the “social-profane and the mythical-sacred”, where the former is tied to time, and the mythical-sacred aspect of human nature transcends time itself (Tuan, 1974: 129).

It was this vertical model of the cosmos, with its view of humans at the centre looking outward and listening, with its parallel connotations of a different sense of time and the sacred, that was gradually replaced by the modern secularising world view of Descartes and Newton. The secular world was horizontally constructed, rather than vertical. The vertical had been based on a vertical axis, with the cosmos revolving around the centre. Movement was perceived to be naturally organised on a circular path, and in many ancient or pre-modern belief systems, the “circle symbolised perfection” (Tuan, 1974: 148). The Scientific Revolution did much to undermine this earlier view of the cosmos, combined with the consequences of European colonial expansion, by replacing a cyclical view of time with linear, directional, time, and a new horizontal understanding of space, signified by the concept of landscape (Tuan, 1974: 148-9). Landscape represents a detached view of nature, a background, a view from a particular prospect, an artistic representation. Nature lost its numinosity with the secularising power of the world machine, lost its height and depth with the transition from a vertical to a horizontal cosmos, and became a commodity to be used, or mere scenery to be appreciated for its aesthetic qualities of charm and beauty (Tuan, 1974: 133). But such an understanding only arose after humanity had gained the upper hand and position of dominance over nature, separated from human experience, and conquered by human technological advances. The world is no longer a sphere, experienced from the inside, but has become a globe, only known from the outside, an external environment (Fig. 3.3) Surely from this perspective, we can no longer say that the environment surrounds us, but rather “it is us who have surrounded it?” (Ingold, 1993: 31).

Implicit in such a modern world view is the image of a globe as something that we imagine from without, which we look back on from a distance, and can only really be understood as it actually is by the process of leaving it, presumably to obtain an
objective viewpoint (Ingold, 1993: 35). Most of our academic work endeavours to achieve exactly this position. In contrast to the pre-modern conception outlined above of a cosmos experienced from within a sphere, the globe is indicative of an object which reflects light on the outside; activity takes place on the surface, and is seen, rather than heard. As we are taught to understand the universe from this position of an exterior perspective, we cannot avoid privileging sight over the other senses, and develop an understanding of the environment and the world that is "divorced from life", and "drawn ever further from the matrix of our lived experience" (Ingold, 1993: 35). It is Ingold's contention that the image of the globe is a colonial one, and reflects the values of a largely Western world view, a dominance of global over local interests, and that such a conception opened the way for the appropriation of the natural world, to be owned, exploited, managed, or conserved (Ingold, 1993: 38-9). But again this understanding reveals its foundations in a prior assumption of separation, that humans could choose from a position or "platform above the world", whether or not to intervene in the environment. Humans could therefore "live on or off the environment, but are not destined to live within it" (Ingold, 1993: 39).

It can be seen that we have created what can be described as a 'gap' or distance between our surroundings and ourselves compared with earlier historical periods. Without doubt much has been achieved as a result of this process, and although it is often criticised by many post-modernist approaches, they perhaps forget that it is the benefits of Enlightenment thought that enabled their criticisms and indeed this analysis. Despite the undoubted strengths of traditional approaches, indeed because of them, it is the contention of this thesis that we have lost our ability to engage with the world about us. For archaeologists, this has become a real barrier in our ability to understand past human societies. But at the same time as Enlightenment philosophical approaches came to dominate our ways of thinking and knowing, other approaches have attempted to counter them. It is to these we now turn.

3.7 Contrary developments
We have seen how the development of the modern world view arose from a medieval and in some respects essentially ancient view, of a transcendent and pervasive
cosmos of inner and outer worlds, where recognition of being part of one, implied a knowledge of the other, to a contrary position where the “subjective mind and objective world were now fundamentally distinct and operated on different principles” (Tarnas, 1996: 287). The universe could only be understood by rational thought and empirical method. All other aspects of human nature, emotional, experiential, imaginative and volitional, were seen as irrelevant, and could not be relied on as representative of reality, but understood as subjective mental constructions. But it was precisely these aspects of human existence that were important for an increasing number of intellectuals dissatisfied with the rationalised mechanistic universe as revealed by Descartes and Newton. These intellectual movements, broadly termed Romantic, of the eighteenth and nineteenth centuries, generally concerned themselves with the inner life of the mind: culture, art, literature, especially poetry, religious beliefs and metaphysics. So while science controlled the outer world, human relationships to it and the limits of knowledge, the “Romantic perception was by necessity limited to the subjective” (Tarnas, 1996: 375).

It is important to recognise the significance of this body of work, not simply in its artistic creativity, but the way in which it forms the historical context and tradition of thinking that created a legacy for developments in later periods. Although it is in many respects the antithesis of scientific rationality, it is also predicated on the construction of precisely that view of the world to which it is ostensibly opposed. It achieved ‘a rival creation’, that pursued the forms and ideas of human consciousness through art and literature and the formal philosophies of Bergson (1928) [1907], (1965) [1946], Husserl (1982) [1913], and Heidegger (1962) [1927], concerned with a “broad phenomenology of human experience” (Tarnas, 1996: 375). The work of William James (1945) [1902], Rudolf Otto (1917) [1950], and others, and their interests with mystical and religious experience, can also be seen in this context (see Chapter Five). The Romantic ‘sensibility’ can be too easily dismissed as an emotional response to the harsh realities of economic and social life for the vast majority of the population of Western nations, engaged in the frenzied development of the agricultural and industrial revolutions of the early modern age. However, because of its origins in the development of the Enlightenment project, the Romantic movement contained the same urge to search and discover the true relationship of people to the world as the natural sciences, and in this sense the “Romantic impulse
continued and expanded the modern mind's overall movement towards realism” (Tarnas, 1996: 374).

An early example of this tendency is perhaps the Transcendentalists, a nineteenth century North American movement concerned with the developing materiality of contemporary life, who sought to establish new values in a spiritual awareness of the reciprocity between humans and nature. Its most famous advocate, Ralph Waldo Emerson (later to influence Bergson) was certainly aware of the dangers of a retreat into aestheticism, of its historical origins and of how a delight in the beauty of nature could be misinterpreted. He was critical of poets in their renderings of nature because of a lack of accuracy in their observations, but also of natural science, in which he was well read, and lectured on many aspects of new scientific discoveries. Emerson considered that “empirical science is apt to cloud the sight, and, by the very knowledge of functions and processes, to bereave the student of the manly contemplation of the whole” (Emerson, 1971: 39) [1836]. He was concerned that too narrow a focus risked missing the significance of larger questions: “Nature stretcheth out her arms to embrace man, only let his thoughts be of equal greatness” (Emerson, 1971: 16) [1836]. It was Emerson who let his fellow Transcendentalist and neighbour Henry David Thoreau build a small hut on his land in which the latter lived for two years. “I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived” (Thoreau, 1986: 135) [1854]. Thoreau sought to demonstrate by practical action and personal example the virtue of a simple life, and he can perhaps also be seen as representative of an early shift in the Romantic movement away from the esoteric classical and mythological preoccupations of earlier writers, reflecting a concern “with the authentic character of modern life in its lived actuality” (Tarnas, 1996: 374). In Thoreau’s case, this was an attempt to show that true understanding of nature and humanity’s relationship to it, derived from a combination of observation, and everyday involvement and experience.

That knowledge derives from experience and action in the world rather than from positing an idea and testing it from a detached viewpoint is central to the above discussion. One of the most influential thinkers concerned with the location of people
and their relationship to their surroundings in the everyday patterns of life is the philosopher Martin Heidegger. Heidegger's work has recently become quite influential in archaeology, for example Thomas (1996) founded his interpretations of Neolithic life on an extensive discussion of Heidegger's philosophy. Tilley (1994) also used the concept of Being in the world (see below) as the basis of his phenomenological approach to prehistoric landscapes. Phenomenology is concerned with how people experience and understand the world. It is therefore not concerned with an objective or detached view of the object, but "involves the understanding and description of things as they are experienced by a subject" (Tilley, 1994: 12). As a consequence, knowledge is not derived solely as an intellectual construct, but is inseparably linked to Being, and experience. It is concerned with ontology not epistemology. For Heidegger, theory arises from the patterns of everyday life, so we need to be able to put this in context before we can understand how we use theory to understand the world. His "hermeneutic phenomenology" "attempts to understand life from within the flow of life" instead of as an objective, external viewpoint (Gosden, 1994: 108). In attempting to change the emphasis of philosophy away from epistemology to ontology, Heidegger is posing the question 'how can we know what we know until we know what we are?'

3.8 Heidegger and Being-in-the-world
The main theme of Heidegger's philosophy to be explored briefly here, is that of his famous work *Being and Time*, in which he stresses the mutual involvement of things and people, and how he attempts to locate people in their everyday action amongst the mundane facts of existence, rather than in "abstracted forms of knowledge" (Gosden, 1994: 41). He criticises the Cartesian dualist construction of a knowing subject and perceived object, and states that being human, is a 'Being', that is "not a disembodied state of knowledge, but a particular physical situation, a special place in the world, a being-there" (Gosden, 1994: 110). Heidegger uses a German term *Dasein* to represent this 'being there'. The implication of a physically-located Being-in-the-world presupposes that there is a world within which to exist, and that it would not be possible to exist in the first place if Being was not in the world. Hence the Cartesian separation between mind:body and humans:nature is seen to start from the wrong assumptions, as it seems to be saying that existence or habitation in the world
is a secondary fact of human existence “rather than something which is its essence” (Mulhall, 1996: 40). The Cartesian view implies that the basic human relationship to the world of physical matter is “one of mere spatial contiguity”, and hence we are simply next or adjacent to objects or matter (Mulhall, 1996: 40). For Heidegger, this ignores the essential nature of existence, as the question of being is inseparably implicated in the notion of ‘being there’, or Dasein. The concept of Being-in-the-world affirms the internal relation between ‘human being’ and ‘world’. Therefore to understand either involves understanding its connection to the other. Emerson, in his own way, stated similarly, that “neither can man be understood without these objects, nor these objects without man” (Emerson, 1971: 19).

In order to locate human relationships to the world, or Being-in-the-world in the everyday, Heidegger uses a series of examples of everyday objects, for example a hammer or a table, to demonstrate ways in which we engage with these things. The traditional western mode of thought attempts to understand ‘reality’ as the realm of material objects that exist externally or ‘out there’. Therefore the Cartesian model suggests that a human confronting an object is simply a relationship in space between two physical objects, for example like a table might touch a wall. Perhaps obviously, a table cannot understand a wall as a wall, only Dasein as a self-interpreting Being that wants to know the elements of existence can comprehend the wall as it is. This raises the problem of how do we know they are real, or that they actually exist? For Heidegger, the way the question is traditionally formulated represents the problem itself. We do not have to keep on attempting to demonstrate that such a reality exists, but “the ‘scandal of philosophy’ is not that this proof has yet to be given, but that such proofs are expected and attempted again and again” (Heidegger, 1962 [1927]: 249) (author’s italics). This problem arises directly from a fundamental failure to understand the proper nature of the relationship of Being to its world, as to ask about the world in this way presupposes that the human subject can be separated and “bracketed off from the question of the existence of the world in which it dwells” (Mulhall, 1996: 95).

This raises further problems with Cartesian thinking about the problem of reality, as whether we can know the world exists, because for Heidegger knowing is part of Being in the world, knowing “must be understood in terms of, and so cannot found,
"Being-in-the-world" (Mulhall, 1996: 96). Therefore the Cartesian concept of sceptical doubt that sees the world as a collection of objects to be known, and to acquire knowledge of, is countered by Heidegger’s concept of Being-in-a-world "where all possible objects of knowledge are encountered" (Mulhall, 1996: 97).

However this latter point raises another problem, and perhaps is an aspect of the main weakness in Heidegger’s thought. If the world itself only exists as part of the relationship of Being in the world, does it not follow that “when Dasein does not exist, neither does the world?” (Mulhall, 1996: 97). Surely it would seem that this construction of the world is dependent for its existence upon the ‘Being-in-the-world’ of humans within it? Heidegger’s reply is that “Dasein encounters material things as phenomena which exist independently of its encounters with them” (Mulhall, 1996: 98). What this means is not that they cease to exist when we no longer encounter them, but that what would happen when Dasein ceases to exist would be the capacity to understand beings in their Being, to discover that they exist. Only Dasein has this quality, but it involves a concept of ‘pre-understanding’, that is “the way in which, within the inescapable circularity of all interpretation, phenomena must be somehow already intuitively comprehensible in order to be known” (Eagleton, 1990: 291).

3.9 Problems with Heidegger

Heidegger’s model of how Being relates to the world is perhaps the weak link in his model, because although Heidegger concentrates on the nature of existence as Being-in-the-world, he puts much more emphasis on Being, Dasein, than on the world in which Dasein exists. By our present-day values this could be said to be somewhat anthropocentric, and a “certain residual humanism” is detectable in the balance between Dasein and world (Eagleton, 1990: 294). A ‘relation’ between Being and world would be the wrong word, but it lacks a proper understanding of the context in which it is supposedly placed. Despite his attempts to locate Being in the patterns of everyday life, and by relations to everyday objects, it fails to escape those criticisms.

The lack of proper development of the context for human being in the world, the environment, is therefore a real handicap to Heidegger’s thought, and particularly to
this study, to which it is central. Heidegger was essentially a philosopher, even though he felt that in many ways philosophy was the problem, and we should return to thinking. He believed that philosophy was trapped in a tradition that went back to Plato, and the fundamental importance of the Idea, or the ‘forms’ that lie behind the structures of things and constitute their essence (Gosden, 1994: 108). Whereas Plato and Aristotle saw thinking as a technology for making and doing, Heidegger suggests thinking should have no end purpose, as Being is simply satisfied by the recognition of its own specificity, and its own existence (Gosden, 1994: 110). The lack of any moral context and the vague phenomenological sense hinder an understanding of any immediacy to a physical world. It is this vagueness of the dependency between Being and world which must remain if Heidegger is not to fall into the subject:object trap he criticises and seeks to avoid, but the result is the “virtual extinction of the subject as a free agent and a philosophy resonant with portentous vacuities” (Eagleton, 1990: 301).

In some senses Heidegger’s work can be seen as a reaction against the rapid German industrialization of the early twentieth century. The ahistorical nature of Being perhaps also reveals an attempt to avoid acknowledging contemporary industrial transitions, and a search for deeper truths in a spiritual crisis (Tarnas, 1996: 389). Heidegger idealized rural life, and his “ontologically correct peasants” (Eagleton, 1990: 309) would become a model for a self-sacrificing Nazi ideology and its symbolic associations of nation, blood and soil. Heidegger never recanted his Nazi connections, and “the reason why he never recanted was perhaps because he never repented” (Eagleton, 1990: 311). It is therefore essential to maintain a critical and balanced approach to his thinking.

3.10 An ecological approach to Being-in-the-world
To re-assert the role of the environment in human affairs and to compensate for Heidegger’s somewhat under-theorised role for the world, we shall now consider a more recent model, Ingold’s 1992 paper on human:environment relations, which in particular is concerned with the role of perception. His work is based substantially on the ecological psychology of J. J. Gibson (1979). The survey that follows will largely mirror the structure and plan of Ingold’s paper, but will also where possible note
convergence, and/or contradictions, with other works. As an anthropologist, Ingold is concerned with the relationship between people and the world from a different perspective from that of Heidegger.

Historically in anthropological thought, culture is the human means of adaptation to the environment. But, Ingold argues, since cultures are systems of symbols, and all meaning is therefore culturally constructed, the environment upon which this symbolic system is imposed “must originally be empty of significance” (Ingold, 1992: 39). It follows that, if the environment is devoid of form or meaning until a symbolic system makes it meaningful, then what did the human culture adapt itself to in the first place? The contradiction inherent in these constructions, which are traditionally part of ‘cultural ecology’ and more recently ecological anthropology, is laid bare. As Ingold states, either the idea of culture as means of adaptation to the environment is abandoned, or we have to forego the “idea that human beings inhabit worlds that are themselves culturally constructed” (Ingold, 1992: 40-1). Yet these two ways of representing our relationship to the environment have dominated the natural and social sciences respectively for decades. Ingold posits a “mutual constitution of persons and environment” in a continuous life process, that needs to overcome the long-held and deeply entrenched modes of thought that lead to alternative constructions (Ingold, 1992: 40). As we have seen, these models either see culture as dependent for its shape and form upon nature, or alternatively construct nature within the all-encompassing category of culture. Ingold approaches the problem from the perspective of a new theory of perception, suggesting it is possible for people to “acquire direct knowledge of their environments in the course of their practical activities” (Ingold, 1992: 40).

3.11 How we know what we see

In traditional thought the environment is understood as the background of passive and inert objects in which organisms find a niche, so the idea of adaptation to the environment assumes that niches exist before an organism fills them (Ingold, 1992: 41). However, Ingold says that this “ignores the most fundamental property of all animals . . . that they perceive and act in their environment” (Ingold, 1992: 41). In this sense, perception and action cannot be separated at all, as following Gibson, we
should understand that animals perceive their environment in terms of what it offers them, or *affords*. Here, objects are encountered as potentials, but this potential is inherent to the object, independently of any use that it may be put to by individual animals. It follows that each animal may perceive different *affordances* from any object due to their own inherent nature, but that because of the independent potential of the object itself, animals can "live in a shared environment" (Ingold, 1992: 43). How, then, does this theory apply to the problem of human:environment relations and the role of culture?

There is a number of ways in which we may perceive the environment. It is possible that we see the environment from a detached 'designer' viewpoint, where it appears as so much raw material waiting to be ordered by a cultural system of meaning. In the latter case, this would include seeing animals as only physical objects without intentions, for whom without the benefits of culture, their environment could simply not meaningfully exist (Ingold, 1992: 43). However, since animals lack the detached ability to be aware of their Being-in-the-world, they are always at one with it, and cannot therefore distinguish perception from action, or knowing from being. Although humans have the ability to adopt the perspective of a detached 'designer' point of view, Ingold suggests that this is not the way in which we normally perceive it in everyday life. To do so would be to "live in a permanently suspended condition of contemplative detachment" (Ingold, 1992: 44). Therefore he concludes that we are also 'at one with the environment' in terms of what it affords us in whatever may be our current act or engagement with it. By comparison with a 'designer' perspective, this "direct perception of the environment is a mode of engagement with the world, not a mode of construction of it" (Ingold, 1992:44).

Such an approach runs completely counter to the generally accepted view of how people perceive the environment, as in the traditional cognitivist view people must know the world before they can act on it. The human knows about the world by receiving and processing sensations into a series of mental images, which are ordered into 'representations'. These are, however, insufficient in themselves for the human subject to know the world, and must be reconstructed "according to the cognitive schemata located in the head of the perceiver, not 'out there' in the world" (Ingold, 1992: 45). It is important to note again the status of the mind over body in the way
that the environment is said to be perceived, the world conceived as a series of mental images, with perception reduced to purely mental activity.

3.12 Direct perception

In complete contrast, Gibson totally rejects this assumption of the importance of mind over body in the role of perception, which creates a “dichotomy between sensation [body] and intellection [mind]” (Ingold, 1992: 45) (my parenthesis). For Gibson, perception involves the whole body, not just the brain (Gibson, 1979: 244-6). All the “receptor organs, together with their neural and muscular linkages”, all as parts of one perceptual system, operate within the context of the environment as a whole (Ingold, 1992: 45). With this model the whole body perceives, understanding and perception of the environment become a process, and meaning and structure are already inherently there in the action of life itself, continuously, not abstracted through a filter of mental representations which have to be refitted together again by mental activity. It is “an experiencing of things rather than a having of experiences” (Gibson, 1979: 239). Perception is therefore also action: “we perceive the world as, and because, we act in it” (Ingold, 1992: 45). The corollary of this is that the human subject does not add on meaning by a mental process after the original sensation, but the information we receive is already there and inherently part of the objects which we perceive. The properties of the object are invariantly part of that object, but whatever qualities we perceive are those that pertain to our mode of being and our engagement in a process of practical action. The affordances that an object offers the human subject will be limited by the effectivities of that subject, its capabilities; in turn, the effectivities of the human subject or non-human animal will be “constrained by the affordances of the objects encountered” (Ingold, 1992: 46). In this sense the ‘effectivities’ are simply the ‘affordances’ of the human subject, denoting a reciprocal relationship between humans and environment.

In our traditional approaches, meaning resides in the realm of the perceiver, where it becomes a variety of different sensations. We make collective sense of these different mental images, and our perceptions are shared because of the way we use language to differentiate and distinguish the series of mental images, and organise them in “terms of conventionally agreed categories” (Ingold, 1992: 47). However,
the theory of direct perception is the exact opposite. It does not see language as central to actually “generating internal perceptions”, or as a necessary factor in our ability to translate, encode, and share these perceptions. Rather, collective understanding is already there in the environment, “prior to the objectification of experience in cultural categories”, in the acts of direct perception and mutual involvement of human subjects and environment (Ingold, 1992: 47)

What role, then, is left for language in the theory of direct perception, or for that matter, culture? It has been argued that Ingold’s model is similar to the phenomenological approach and the “view that the individual adds nothing during the act of perception is too extreme” (Jones, 1998: 11). In this sense the purely ecological basis of Ingold’s model is revealed, as culture or language and symbolic thought has no role in the process of human subjects knowing the world, “but are needed to make such knowledge explicit” (Ingold, 1992: 52). We understand and know the world in the process of acting within it, so language is the means by which we share knowledge and attribute cultural categories to it. Hence the generally accepted model in the social sciences, where language and culture construct the environment and allow us to act within it, becomes “not so much a prelude to practical action as an (optional) epilogue” (Ingold, 1992: 52) (author’s italics). This does not mean that Ingold denies the human ability to imagine different worlds. Rather, his model makes a real distinction between perception and imagination, as opposed to traditional cognitivist assumptions that make little or no distinction between them, but set up boundaries between the internal perceived world and the objective reality.

Ingold’s separation of perception from interpretation, practical activity from language, has been criticised by Tilley as it sets up “artificial barriers between practical activities and discursive levels of consciousness that go to constitute each other, neither of which is amenable to prioritization” (Tilley, 1994: 23-24). By comparison Tilley argues that the “cultural construction of the environment is both ‘prelude’ and ‘epilogue’” and cannot be separated (Tilley, 1994: 24). In turn, this would again seem to collapse the role of the environment to a cultural construct, and perhaps reflects a tendency within much recent (post-modern) thought to reduce everything to culture and language. However, it is important to see that “we are not
For Ingold, although imagination and the role of language in making sense of imaginings are human qualities “unmatched by other species”, such activity “implies a contemplative disengagement from the world” (Ingold, 1992: 52). Although humans therefore have the ability to ‘step outside’ the world, to the position of a spectator, in the process they become disengaged from the environment, and it “reverts to nature”; denied human involvement, it becomes devoid of meaning (Ingold, 1992: 52). It only assumes significance when human cultures and individuals apply their own categories “to a reality rendered otherwise meaningless in consequence of its [and their] dissociation from action” (Ingold, 1992: 53)(my parenthesis).

In this way culture is understood as the framework we invent for interpreting the world, and language makes this knowledge and interpretation knowable and enables it to be shared. Importantly for the context of this study, this means that interpretation is not therefore necessary for us to perceive things, as we perceive in the process of action, and knowledge and interpretation are the epilogues to practical action. This means that we can perceive but fail to interpret things, and hence “our knowledge of them remains tacit” (Ingold, 1992: 53). Also, our ability to imagine allows us to disengage from the world, to achieve an objective self-awareness, but in so doing, ‘nature’ becomes meaningless. The meaning is only recovered through a process of cultural classification of the world that is necessary when “action turns reflexively inwards on the self” (Ingold, 1992: 53).

### 3.13 Discussion: perception and archaeology

We have now looked at two rather contrasting approaches, both of which are critical of the traditional Cartesian dualist construction. Heidegger may be criticised for his lack of real concern or context for his ‘Being-in-the-world’, whereas Ingold by his own admittance has probably left his fellow anthropologists and not a few archaeologists “horrified at the thought” of leaving culture out of the ecological equation of human:environment relationships (Ingold, 1992: 53). However, despite
these differences, it is the similarities that are interesting. Both place knowing as part of action. For Heidegger it is already part of what constitutes Being there, or Dasein, and not a preliminary state of knowledge that exists prior to Being. For Ingold, knowing is part of the process of perception itself, which lies in action, the act of perceiving. Both suggest that people and surroundings are implicated in each other through action and involvement through Being, an idea which gains support from ideas in twentieth century physics (Bohm, 1980: 177). Both, therefore, have attempted to overcome the nature:culture, and mind:body dichotomies discussed in Chapter Two. Ingold suggests that the dualistic divide is actually a "consequence of the retrospective, analytic decomposition of our immediate and active perception of the environments in which we live and work" (Ingold, 1992: 53) (author’s italics).

With Ingold’s model, we can criticise the idea that perception is part of action and it precedes cultural interpretation, as this seems to ignore the cultural context within which perception and action with an object occur in the first place. However, Ingold’s model does counter the reduced role for the environment in much recent work, and the suspicion must be that cultural construction models are partly the consequence of an inward-turning, largely urbanised, intellectual elite, which has evolved in Western countries in the last 100 to 150 years. Such a turn has been noted in the abstraction of much twentieth century art, and has been termed a retreat to the Self (Huxley, 1994 [1954]: 32).

The main approach to perception used in archaeology and anthropology tends to be either an environmentally-deterministic one, where perception is a response to the external environment, or a mental-cultural-construction that imposes interpretations on the world. Jones (1998: 9) has advocated a middle ground of seeing the perceptual framework as “the result of the interaction between the individual and the environment”, but this would seem to paper over the inherent contradictions of the approaches, no matter how subtle the model. Phenomenology as it has been used in archaeology is primarily about perception. Phenomenologists argue that it is “what phenomena mean that define their reality, not what they are” (Billinge, 1977: 57) (author’s italics). Likewise Tilley argues that it is the meanings prehistoric societies attached to landscapes that determined their actions. The use of Heidegger’s 'hermeneutical phenomenology' by Tilley and others is based on the
phenomenological assumption of what it is to be human, a “fundamental ontology, that is a universally applicable interpretation of the nature of ‘Being’” (Brück, 1998: 24).

What constitutes human ‘Being’ is the involvement of humans in their surroundings, for example movement through the landscape, where the “material world is constitutive of existence” and not just space made meaningful by the presence of an individual (Brück, 1998: 25). What this means for Tilley is that if the landscape has the same physical form as in prehistory, then it will constrain and enable movement by an archaeologist in the present as it did for prehistoric populations. If movement is constituent of Being, then Tilley’s movement through and experience of the land will be similar to those of past individuals. In effect it is arguing that the archaeologist can become an actor within a ‘prehistoric’ landscape and perceive the meanings and experience of it. But the main problem is that phenomenology as a philosophy does not give rise to a method of analysis, because it “is concerned with ends rather than means” (Billinge, 1977: 62) (author’s italics). As a result we are left with the experiences of an archaeologist in the present.

The problem here would seem to be the assumption that just by ‘being there’ an archaeologist can understand the meanings inherent in the landscape for prehistoric populations. However, this ignores the cultural outlook and how different environments influence understanding. For example, the BaMbuti Pygmies who lived in the “encompassing element” of the Congo rainforest could not understand perspective, and when seeing buffalo grazing on open grassland in the distance for the first time asked: “what insects are these?” (Tuan, 1974: 80). We do not have the same environment, knowledge or beliefs as Neolithic populations, so we cannot directly understand the meaning different facets of it would have had in the same way.

Another factor is that the ontological model proposed by Heidegger and phenomenologists generally “denies the multiplicity of human experience by prioritising a mode of Being that may be historically specific” (Brück, 1998: 30). These are relevant criticisms and Brück suggests that Tilley misses the importance of interpretation: “perception is not simply a physical process but is a deeply cultural
phenomenon” (Brück, 1998: 34), although again we can detect favour towards one side of the nature:culture division in this statement, and it is this which is the problem. However, recognising the importance of specific cultural contexts is not contradictory to acknowledging the relevance of biological universals, or perhaps Ingold’s ‘affordances’ and ‘effectivities’. It may be useful to see human:environment relations as moving along a continuum between participation and causality, where different activities involve different modes of ‘being’ and engagement with the world, from religion to science (Tambiah, 1990, 85-109). The ahistorical nature of Heidegger’s Being could therefore be overcome. It would also allow us to understand pre-modern societies as generally but not always occupying a different end of the continuum from Western society.

The problems outlined above are not unique to archaeology, and other disciplines encounter the same handicaps within their own specialisms. For example many anthropologists now recognise that the dualist paradigm “hinders true ecological understanding” (Descola and Palsson, 1996: 3). In anthropology this has worked in two different ways, which ultimately and paradoxically result in contradicting the position each approach starts from. In ‘cultural ecology’ and materialist approaches generally, it is assumed that human society is expressly adapted to the environment in which it is geographically located, but if applied as a universal concept, it results in an “extreme form of ecological relativism”(Descola and Palsson, 1996: 4). From a culturalist perspective, however, where each human society imposes its own meaning on the natural world, and is not comparable to any other, it results in a position that still “leaves unquestioned its assumption of a universalistic conception of nature” (Descola and Palsson, 1996: 4)

A corollary of this viewpoint is the way we generally assume that alternative views of other human societies’ relationships to their environment are nothing more than their own ‘mental constructions’, and although interesting in their own right, have no greater significance. Ethnographic evidence may be used in archaeology as models for prehistoric societies, but how seriously do we take their beliefs and systems of knowledge? We shall discuss this in the next chapter.
3.14 Conclusion

The chapter has shown that the traditional ways of thinking about our surroundings are not only flawed, but also potentially contradictory. The strengths of Western thought have certainly allowed us to understand ourselves in relation to the cosmos in ways unimagined before the Scientific Revolution, but paradoxically, this very process has resulted in a separation of humans from the world they inhabit. By prioritising some sense and qualities that can be modelled mathematically, over those experienced by all the senses, science has become a “kind of ‘metaphysical archaeology’ which strives to reveal an underlying mathematical reality” (Bortoft, 1985: 293). Different strands of thought have attempted to overcome this determinism, such as cultural construction models, or those that put the nature of Being at centre of the enquiry, but these have also under-theorised the role of the environment. I would suggest this might be largely due to the inward turn of language and text-based approaches that reflect the concerns of a more urbanised academic outlook.

Other examples such as Ingold’s run the risk of leaving culture ‘out of the equation altogether’. This is surely only to be expected, as any alteration of the nature:culture framework is bound to cause consternation on one side of the divide or the other, precisely because the concepts of nature:culture are predicated on each other. Such is the fundamental nature of these key concepts of nature:culture, the result of any profound change is bound to open up “an entirely different intellectual landscape” (Descola and Palsson, 1996: 12). Such a process is likely to take a considerable period of time, but there are other potential alternatives to aid this process. Anthropological work amongst other cultures has shown that the universal categories of nature:culture are for many indigenous peoples “utterly meaningless” (Descola and Palsson, 1996: 7). So building on the models of humans and the world outlined and discussed above, I shall now look at different contexts, specifically non-Western ones, and explore how indigenous peoples and other cultures, especially hunter-gatherers, explain and interpret their relationship to what we call Nature.
Fig. 3.1 Two views of animality: as a domain (including humankind), and as a condition (excluding humanity). (After Ingold, 1994).

Fig. 3.2 Two views of humanity: the 'primitive' hunter-gatherer conceived as a version of economic man and as a species of optimal forager. The consequences of a nature:culture dichotomy. (After Ingold, 1996).
Fig. 3.3 Different human relationships to the environment: (A) as a lifeworld, and (B) as a globe. (After Ingold, 1993a).
CHAPTER FOUR

THE HUNTER-GATHERER WORLD VIEW

4.1 Introduction
There are two main reasons to examine the hunter-gatherer relationship to the environment. The first is to build on the themes developed in previous chapters, that is, how humans are implicated in their environment, how perception is part of action, and perhaps to demonstrate indirectly, that a hunter-gatherer world view is not necessarily dissimilar to these models. Following from this, the second aim is to develop a generalised model of hunter-gatherers to gain a better appreciation of the role of Mesolithic populations in the transition to agriculture. This is not just to develop an understanding of their ecological relationship to their surroundings, but to show how important the religious and spiritual aspects are as well. These elements, as we shall see, cannot be separated. There are many examples of indigenous peoples holding beliefs of a unity of humans and what we call the environment. Our Western culture tends to secularise and separate religion from everyday life and action, but in many native traditions, all of life, which we separate into economy, environment, and society, is thoroughly permeated with religious and spiritual thought and action (Hubert, 1994: 16).

There are always potential problems with translating these concepts into ways that we can understand, and as a result it is very difficult for us to describe these societies in terms that accurately represent them. I argue that our own assumptions are also a barrier to understanding and that we misinterpret the meaning of hunter-gatherer world views, which deserve to be considered as knowledge in their own right. I shall look at problems of translation later, but most of the following account will attempt to put hunter-gatherers into context using perhaps less usual academic language, partly to illustrate the gap which exists between our understanding and theirs, but also to draw out and emphasise the fundamental importance to them of the land itself, not as a geographical space, but as a spiritual force.
4.2 Hunter-gatherers and farmers

This chapter deals primarily with hunter-gatherers, but our understanding of them can be enhanced by comparison with small-scale cultivators and agriculturalists. Often, though, these are represented as ideal types of hunter-gatherers or farmers, which are then set up in opposition and/or made to conform to particular patterns of cultural behaviour, which tend to reflect an underlying nature:culture dichotomy. Our models of hunter-gatherers have also been split between those egalitarian societies with an ‘immediate return system’ (Woodburn, 1982), and more complex societies with some social stratification and wealth differentiation, termed ‘accumulators’ (Hayden, 1994). However, this is too simplistic, and really these two types should be seen as different ends of a continuum (Tilley, 1989: 249).

The former is the traditional simple, mobile group with no food storage, as food is consumed as it is caught or gathered. These groups have a relatively undeveloped sense of ancestry and lineage, and social practices that actively discourage accumulation of wealth or accruing of social status as “levelling mechanisms come into operation precisely at the point where the potential for the development of inequalities of wealth, power and prestige is greatest” (Woodburn, 1982: 440). The relatively fluid social structure, of individual and group mobility, tends to “disengage people from property, inhibit not only political change but any form of intensification of the economy” (Woodburn, 1982: 447). They tend to be conservative, and the social flux only serves to emphasise the environment as the main constant of their lives (Turnbull, 1968: 137). Land is used as the subject of their labour, from which they simply take the necessities of life directly. Production is instant, an ‘immediate’ return, which very importantly is shared, and once accomplished, leaves people “free from any further reciprocal obligations or allegiance” (Meillassoux, 1972: 99).

For cultivators, land is the object and instrument of their labour. Here the co-operation and continued necessity of co-operative labour link and bind people not only during the period of production and non-production, but also to the people who produced the seed and food of the previous cycle, so the “cyclical renewal of the relations of production theoretically never ends” (Meillassoux, 1972: 99). In time these elements can come to form a template for the importance of the family and
'kinship' as an ideology (Meillassoux, 1972: 99). Developments of this are a concern with the reproduction of the social group, a cult of the ancestors, and fertility of the land (Meillassoux, 1972: 100). Agricultural economies are based on relations with people, while hunter-gatherer economies are built around relations with things and the environment.

However, it is perhaps a little simplistic to differentiate purely in terms of subsistence practices, as sometimes hunter-gatherers do attempt cultivation and agriculturalists hunt. In a study of hunter-gatherers and neighbouring cultivators in southern India (the Nayaka and Mullu Kurumba respectively), Bird-David (1990) suggests that the Nayaka consider the forest as giving unconditionally ‘as a parent’. In contrast the Mullu Kurumba view nature as an ancestor, which gives of its wealth ‘reciprocally’ ‘in return for favours rendered’ (Ingold, 1994: 123). The former is a ‘giving environment’ and the latter a ‘reciprocating’ one (Bird-David, 1990: 191). In this respect the Nayaka relationship to the forest is the same as between members of the social group, as the forest gives and shares with the people and the groups share its bounty amongst themselves in a ‘cosmic economy of sharing’ (Bird-David, 1992: 30). In social terms sharing ensures an obligation to share in future, so economic security is strengthened (Bird-David, 1992: 30). Hunter-gatherers seem to integrate these aspects of life that Western thought separates into social and ecological relations. The main difference between hunter-gatherers and cultivators or agriculturalists is therefore in their distinct views of the environment.

The relationship to land for cultivators is deemed to represent the appropriation of resources by the demarcation of an area of land by fences or boundaries. Tenure is usually seen as a legal term, although in social evolutionary frameworks it is associated with food production, that is, domestication, implying “man’s subjective transcendence of the natural world” (Ingold, 1986: 135). In contrast, hunter-gatherers were deemed to have failed to overcome nature, or rise above nature, so they were understood to have territories, like non-human animals. But tenure, is for Ingold, more accurately a mode of appropriation, by which people “exert claims over resources dispersed in space” (Ingold, 1986: 133). In this respect both agriculturalists and hunter-gatherers operate systems of tenure, but they are different.
How does tenure in hunting and gathering societies work? It is useful to compare this to tenure in agricultural societies. Ingold suggests the latter is two dimensional (of the earth and ground surface), whereas paths are one-dimensional and places or sites zero-dimensional (Ingold, 1986: 147). For hunter-gatherers the territory or country is known and ‘appropriated’ by moving through it along the paths, and it is the views these places command across a territory that are important, because the land is understood as being ‘condensed’ within the site or place. Land here is distinct from landscape, and defined as the creative potential of an area, so it can be seen how the land can be appropriated by hunter-gatherers by “holding the objects or features that originally contain it”, that is paths or places (Ingold, 1986: 154). Agriculturalists appropriate the land by destroying those connections and creating a substitute environment (Ingold, 1986: 154). Bradley has neatly summarised Ingold’s argument that “agriculturalists tend to enclose resources, whilst hunter-gatherers control the paths running between places” (Bradley, 1991: 136). Because nature is indivisible, the places should not be seen as part of the wider whole, but rather the country “is a partial view of the whole from a specific place”, or that part of the whole visible from the place (Ingold, 1986: 155). By contrast territoriality is a form of communication about the dispersal of individuals in space (Ingold, 1986: 133).

For hunter-gatherers, defence of a territory is not about firm boundaries but advertisement, and there is no restriction to the flow of people into the territory, although visitors should advertise their presence and accept a subordinate position to the occupying group (Ingold, 1986: 133-4). Territorial behaviour is therefore primarily communicative, and signs, in the form of marked trees and cairns, are left to be found and ‘read’ by neighbouring groups who recognise the need to respect these markers (Ingold, 1986: 147). It is also co-operative in the sense that different groups know what land is being utilised and by whom. The understanding of land and territory for hunter-gatherers comes from their involvement in it through the day-to-day practice of hunting and collecting. In this way the individual and clan come to identify themselves with the land. People have a claim on land by moving through it, and tracks and paths are symbolic of the process of life itself as “who one is becomes a record of where one has come from and where one has been” (Ingold, 1996: 138). In this way places linked by paths of movement also become relations between people. Indeed social relations amongst the Pintupi of Western Australia, are spoken
of in terms of relations between places, so the social and physical worlds are ontologically equivalent (Ingold, 1996: 138-9; Myers, 1986: 49-50). For the Nayaka of southern India, the land is “not an object to be owned but something that people can be closely associated with and related to” (Bird-David, 1990: 192).

4.3 Conservation and planning

The simple basis of ‘immediate return systems’ is misleading, as it implies a failure on behalf of the hunter-gatherer to plan ahead, or make some (limited) investment in technology, or note, or be aware, of changes in the environment. Hunter-gatherers see themselves as conservers of their environments, and care for the animals and plants with the “same close and affectionate involvement that they bring to caring for other people” (Ingold, 1994: xxii). Hunter-gatherers “cultivate a relationship with plant/animal beings, not with nature” (Martin, 1993: 54). There are numerous examples of these kinds of beliefs and practices: for example, amongst the Maori of New Zealand, trees were considered to possess sacred characteristics, so that when “the Maori entered a forest he felt that he was among his own kindred” as the trees and humans were considered to be of common origin (Levy-Bruhl, 1965 [1928]: 32). As a result the act of felling a tree was a serious matter, and it would have been necessary to perform a rite to placate the ‘spirit’ of the tree. Similarly, amongst the Sto:lo Indians of south-west British Columbia, apologies must be made to cedar trees for breaking their branches (Mohs, 1994: 190-1). These two small examples typify many of the characteristics found amongst other indigenous peoples, and although not always appreciated in the past, when applied on a practical level, their actions correspond well with our ideas of ‘conservation’, and what we would term ‘planning’, or scheduling.

The distilled knowledge of generations and the experience of individual hunters and gatherers from moving through the land provide them with ‘mental maps’ of their surroundings, not just of locations in space, but in time as well, for example where to be at the right time for the flowering or fruiting of a particular plant (being), or where to encounter specific game quarry (animal beings). Inherent in these schemes is clearly a schedule of sorts, though not perhaps the more systematic planning of agriculture, but planning that is “patterned and thoughtful” (Brody, 1983: 87).
Planning is not limited to purely seasonal activities, as amongst the Beaver Indians of north-east British Columbia there is an awareness of when to hunt and the movement from camp to camp varied from year to year, so “some territories were left fallow for several seasons” depending on their assessments of the resource (Brody, 1983: 87). But what emerges clearly from examples like these hunter-gatherers is their perception of a need to limit the human impact. Essential to this understanding is an acceptance amongst hunter-gatherers that ‘nature’ herself “would determine the terms of abundance, location, and timing” of these plant/animal beings of human need (Martin, 1993: 54). But crucially, as Martin suggests, it is not ‘nature’ as we understand it, but the plant/animal beings themselves who decide.

4.4 Hunter-gatherers and plants and animals

The relationship to plant and animal beings is not just about ensuring a good supply of food, but is inseparably part of the hunter-gatherer’s view of selfness and their whole sense of being. Many early anthropological accounts mention the need or desire amongst indigenous peoples for a sense of unity with animals and plants (Levy-Bruhl, 1965 [1928]: 33). There is a feeling of dependence on their goodwill, and the hunter-gatherers attempt to emulate and follow the ways of life of plants and animals as the model for their own lives. These beliefs of the essential homogeneity of all beings that facilitate communication between humans and animals and plants are much more fundamental than a single aspect of human behaviour. We should not reduce it purely to being a simple belief or mental construction: it is far more important, and is part of what constitutes for hunter-gatherers the whole essence of being and their definition of selfness. Just because a hunter-gatherer experiences pain, pleasure and other sensations, and attributes various actions to himself or herself, it does not follow that the individual understands herself as a conscious ‘subject’, and as such something different from ‘objects’. As Levy-Bruhl has suggested, to attribute such awareness of differentiation and distinctions to the ‘primitive’, and why he or she is unaware, would be to fall into “the psychologist’s fallacy” of imposing Western frames of thought (Levy-Bruhl, 1965 [1928]: 15). The direct apprehension of him or herself as an individual “forms only a small part of the idea he has of his own personality”, as in hunter-gatherer societies which are
predominantly collective, the individual tends to see him or herself as part of a social
group and environment (Levy-Bruhl, 1965 [1928]: 68).

There are several variations in the ways that hunter-gatherer societies define
themselves in relation to their surroundings, and the definition of being is not
restricted purely to human beings. For example, the Chewong aboriginal people of
the tropical rainforest of Malaysia do not classify species in terms of human, animal
or plant, although they do have ideas that are fundamental to their view of
themselves. First is a class of beings which are “constituted on the basis of presence
or absence of consciousness”, which to the Chewong involves meaning, and
language, reason and intellect, and a moral conscience or knowledge (Howell, 1996:
131). This quality of consciousness makes one a ‘personage’ regardless of whether
the outer shape is human, ape, pig, frog, fruit or bamboo leaf, or “the thunder being
or a specific boulder” (Howell, 1996: 131). An absence of these qualities of
‘personage’ does not necessarily make anything else automatically a member of
another category, because terms like ‘animal’ and ‘plant’ do not exist. But they do
tend to have a whole series of named species which are not ordered into a hierarchy
of perceived similarities, but rather a “tendency to enumerate”, which is usually
“predicated on identity, and naming” species and ordering them in terms of equality,
and not hierarchically as our own classification system does (Howell, 1996: 131).
Their world view is therefore based on the symbolic contrasts and distinctions they
make between those members of what we call animals, plants and objects, but which
they decide are ‘personages’ or not. This is how they distinguish between self and
other, so in this sense they do make distinctions between ‘us’ and ‘them’ (Howell,
1996: 141), although these are not of a dualistic nature as in Western frameworks,
and there are no absolute boundaries (Fig. 4.1).

Similarly, for the Jivaroan tribes of eastern Ecuador and Peru, non-human animals
and plants are considered as persons (aents), who “share some of the ontological
attributes of humans” and they are linked to their domesticated plants with “ties of
consanguinity, or by affinity to animals of the forest” (Descola, 1996: 90). These ties
of consanguinity, or belief in common ancestry, are only one of a number of ways in
which human societies identify human as opposed to non-human beings, usually
defined in terms of animic or totemic systems. These systems are ways of identifying
and defining the boundaries between “self and otherness as expressed in the treatment of humans and non-humans” (Descola, 1996: 87). A third cosmological construction is naturalism, which is our own system of beliefs regarding the natural world, which was discussed at length in the previous chapter.

The Turkanoan Indians of the Upper Amazon of eastern Colombia have an animic system of reciprocity of relations between humans and nature that is “based on a principle of strict equivalence between humans and non-humans sharing the biosphere” (Descola, 1996: 89). Because the cosmos is understood as finite, any energy taken from it by hunting of animals or collecting of plants needs to be returned in the form of human souls to the ‘Master of Animals’. It is the “subsequent transformation into game animals” of these human souls, which ensures the equilibrium of the cosmos by this reciprocal exchange of ‘energy’ (Descola, 1996: 89). The totemic system of Australian Aborigines does not generally see the predation of animals and plants as something that requires compensation in the form of a reciprocal exchange of energy. In aboriginal societies animals are treated ritually, not through hunting activity itself, but in specific rituals. These ceremonies are used to focus on the cohesiveness of the social order by stressing through ritual an “abstract lineal continuity between the community of non-humans and the community of humans” (Descola, 1996: 95-6), and the totemic relationships are an important part of “individual and social identity” (Silberauer, 1994: 125). In this respect “animals are either good to eat or food for thought, but they are never social partners” (Descola, 1996: 96). Totemic systems tend to be the exception.

The role that myths take is very important in explaining these relationships, and they need to be spoken and repeated at specific times in order to keep them alive and to help “regenerate the system” (Martin, 1993: 15). For the Wintu of northern California, mythology maintains the balance of body and spirit, explains natural phenomena, and “its embodiment in geographical reflections enhance the Wintu sense of consciousness” (Theodoratus and LaPena, 1994: 22-3). The myths of many different cultures commonly include all kinds of animals as humans, and changing shape between them, where everything is alive and sharing that aliveness, and capable of being something else. In the past, the Western world has often characterised these beliefs and practices as the product of a childlike imagination, or
that of the ‘primitive’, for example the work of Lucien Levy-Bruhl. However, although he describes indigenous peoples as ‘primitives’, through his work as a philosopher he was quite aware of the limitations of our own modes of thought in attempting to categorise so-called ‘primitive’ belief systems (Tambiah, 1990).

An example of this is the power of speech. The fact that myths are used at certain times of the year, and that hunter-gatherers believe that their surroundings can hear them when they speak, emphasises the power that speech, even mundane everyday conversations can have in forager societies, because it can reach beyond ourselves (Martin, 1993: 14). As foragers consider their surroundings to be alive, myths and oral traditions perpetuated rules of behaviour: for example, amongst the Saami people of northern Europe it was considered essential “never to yell or boast in nature, in order not to disturb or challenge the spirits” (Schanche, 1994: 122). This is especially important in hunting. The trick that enables hunter-gatherers to participate in the world about them, is by learning “the language (power) of the other-than-human being” (Martin, 1993: 12). The means of accomplishing this is by bonding themselves to the “spiritual/physical space” of the animal and plant beings through the ecstatic experience of the vision quest, in which is learnt the song of the animal (Martin, 1993:14). This could usually be done in one of two ways. In northern Asia and the Arctic regions, shamans either learnt the secret language of animals and spirits by being taught it, or preferably by singing their own song as a way of invoking the appropriate (guardian) spirit (Eliade, 1989 [1964]: 96). Alternatively the song of the animal, or very often a bird, was learnt through imitation; in South America, for example, this seems to have been an important part of the process. These songs may often form a rite of passage for young men, and were not necessarily the sole preserve of a shaman, particularly in North American traditions (Eliade, 1989 [1964]: 97). Although it is possible for any Indian to “obtain his guardian spirit if he is prepared to make a certain effort of will and concentration” and attain “magico-religious powers”, only shamen “by their capacity for ecstatic experience” could make such activities into a vocation, to be called upon at will (Eliade, 1989 [1964]: 106-7). Martin states that we no longer speak this language, as our discourse has removed the ‘human:other-than-human’ conversation leaving simply ‘human:human’. The animals and plants “have been disfranchised, defined or
spoken out of discourse into dumb brutes or unconscious vegetable matter” (Martin, 1993: 28-9).

4.5 Hunting
The cosmological relationship is therefore already part of every action and thought, and takes on great importance in the hunt, a relationship that has been termed “the metaphysics of killing” (Martin, 1993: 85). For example, hunting is not simply an environmentally-determined behavioural strategy, but a “mode of skilled and attentive engagement with no-human animals” who because they also have “powers of agency, are likewise attending to the hunter” (Ingold, 1994: xxii). With pastoralism, the herdsman’s control over his animals is based on the implicit assumption that they are “sentient beings with the capacity to act and suffer” (Ingold, 1994: xxii). As a result, there can be no absolute boundary between the relations of humans with no-human animals, from “the domain of their involvement with one another” (Ingold, 1994: xxii). It is the quality of the involvement and relationship that differs, which Ingold describes as a contrast between trust and domination (Ingold, 1994: xxii).

Hunter and hunted are interdependent and aware, and “predator and prey are stamped with one another’s psychic personality, or nature”, and it is this mutual relationship between hunter:hunted, vice versa, and both to place that is seemingly understood and implicitly recognised by both (Martin, 1993: 85). The forager must be aware of the powers and forces inherent in the animals and plant beings, in order to be successful in what they do, whether it is hunting, collecting or fishing, or making things. For example, if game is not caught there must be a mystic reason. For the Eskimo, if hunting is unsuccessful, then the caribou must be refusing themselves: the collective spirit or genius of caribou has “withdrawn the favour from the men whom he formerly permitted to track and slay them” (Levy-Bruhl, 1965 [1928]: 65). Therefore it is extremely important to establish and maintain good relations with the animals and plants to ensure the success of the hunt, in this case evidenced by the honour done to the slain animal by the hunter and his family, which they believe to be the “genius of its species” (Levy-Bruhl, 1965 [1928]: 66). In effect the animal embodies all of its kind. Because hunter-gatherers have the conviction that all that
surrounds them is self, to kill a plant or animal being is not murder but a transformation (Martin, 1993: 86). For the Mbuti the killing of an animal is “a moment of intense compassion and reverence” (Turnbull, 1965: 161). It is especially important that the plant or animal being is eaten, as through this process it becomes the hunter, and the hunter becomes the plant/animal being. “Eating confirms my selfness with what I consume” believes the forager (Martin, 1993: 86).

The actual practice of hunting allows different insights. Work amongst the Huarani hunter-gatherer people of the Amazon has shown how well they can predict animal behaviour and locate prey they cannot actually see, partly by developing their senses of hearing and smell so “they feel the presence of animals and anticipate their next move” (Rival, 1996: 148). Intriguingly, they also use a different method of walking through the forest when hunting and collecting than when simply moving from place to place. They pay close attention to the movement of animals, note the maturing fruits and plants, what has changed, blossomed or wilted: they take a pleasure in it (Bird-David, 1992: 30; Rival, 1996: 148). Forays into the forest may be an end in themselves, as often people collect little or nothing, but “they feel they are in touch with the natural agencies” (Bird-David, 1992: 30), as people become involved in a ‘silent conversation’ with the plants and animals (Rival 1996: 148). The kinship or communion expressed by this relationship between humans and animal and plant beings emphasises another important element of the hunter-gatherer way of life, again supported by ethnographic evidence. The relationship breeds respect and confidence, and self-assured competence in the activity of finding food, because “nature is no adversary” (Martin, 1993:19). The idea of the food quest being a desperate striving for survival and of hunter-gatherers permanently on the edge of starvation is a Western myth, originally rebutted by Sahlins (1968). Finding food is not seen as a problem, provided they maintain correct behaviour. It is therefore ostensibly taken for granted by foragers, and is reinforced by myths which state that an “individual must be the animal before presuming to kill and eat it” (Martin, 1993: 19). The belief in the homogeneity of all life allows little room for alternative beliefs. From her own experience of hunting with the Huarani, Rival says their bodies take on the smell of the forest and become an intrinsic part of it, where the hunter learns to see and understand the world from the animal being’s perspective, and “recognising the animal’s capacity for will and purpose” (Rival, 1996: 148). There is
a recognition not to take, but to accept Nature, or the plant and animal being’s volition, to give themselves to humans (Martin, 1993: 53). Animals are deemed to have ‘given’ themselves when they cross the path of the hunter, or the hunter crosses their path (Ingold, 1980: 155).

It is useful to compare these practices with Western beliefs. Most of Martin’s (1993) synthesis is based on an historical analysis of the changing relationships between Europeans and Indians, and the effects of these on Indian attitudes to game, and trapping practices. Martin quotes first-hand accounts of European settlers and explorers in North America encountering Indians who said game was scarce, and that they were starving when clearly this was not the case. Often the Europeans found from other sources that the Indian “has been living in abundance” (Martin, 1993: 47). The Indians had been lying, and were considered dishonest and untrustworthy as a result. But for the Indians to say out loud that the game was easy to kill would be to offend the plant or animal beings themselves, who would hear what was said. They believe the universe is “aware, sensate, personified. They feel. They can be offended” (Nelson, 1983: 14). Speech is powerful, and hunter-gatherers must be careful of what they say. If the animal and plant beings are offended, they could inflict disease or refuse to be caught as prey, so hunter-gatherers must treat the animal and plant beings with respect if they wish them to “yield themselves” (Martin, 1993: 14). So although there would appear to be an absence of anxiety or fear concerning the food quest, there is also an underlying tension and belief that things can possibly go wrong. The maintenance of confidence in the relationship is extremely important as the very fact of obtaining plants or animals “reaffirms their relationship with the natural agencies and therefore secures the recurrence of sharing” (Bird-David, 1992: 31).

4.6 Artifice and material culture
Because hunter-gatherers believe that all around them may change into anything else, the animals, rocks and trees that constitute their surroundings are essentially mutable, as “beneath their seemingly strong diversity they present an essential homogeneity” (Levy-Bruhl, 1965 [1928]: 20). It is important to bear this in mind when considering the meaning and significance of human creative abilities, which Martin terms
artifice. He suggests that hunter-gatherers believe that any image they create from bone, wood or stone, for example will “embody the power, the being, the life of their fleshy (corporeal) counterpart” (Martin, 1993: 10). The homogeneity of things is not restricted to non-human animals and plants, but also to minerals; objects such as stones, for example, are to the Krujit of the former Dutch East Indies considered immortal, and are to “the soil what bones are to the body”, and accorded respect (Levy-Bruhl, 1965 [1928]: 27). Therefore creating a likeness to the plant or animal being through human artifice meant the personhood and power of the plant or animal are “injected into the substance itself” (Martin, 1993: 10). By imaging the creature or whatever and creating a likeness, humans can communicate with both the creature and the medium from which it is made.

Because hunter-gatherers conceive of themselves as the “consummate imagers of creation”, they believe it is Homo who has the mental powers and physical ability, hands and eyes to express their imagination by creating these other life forms, in “interpenetrating, articulate, conscious imaginations (images)” (Martin, 1993: 10 and 11). These powers of association and power of human artifice have a quite fundamental importance in structuring the hunter-gatherer world view, as this ability enables the maker to “flow into another shape, another place of being” (Martin, 1993: 11). Therefore these abilities are not only the key to an imaginative world of human creation, but importantly, “artifice thus assists in setting the terms of selfness . . . and making more real . . . the realm of true humanness, of true self” (Martin, 1993: 11). It is another example of the way that hunter-gatherers view their surroundings as essentially mutable. The origins of these beliefs lie in the wider understanding of the sacredness of the land itself.

4.7 The sacred landscape

The evidence from ethnographic accounts of indigenous peoples the world over demonstrates a close attachment of people to land and places. This relationship has been expressed by many writers in surprisingly similar ways. For example, the Mongols do not see the land as passively waiting for them to transform it to their will, but rather they acknowledge it and let it “pervade them and their herds, influencing where they settle, when they move”. They ‘in-habit’ it (Humphrey, 1995:
Each location and even elements of the vegetation are considered to have 'power'. Implicit in the Mongol herder's understanding of landscape is that the features of the land "have their own being and nature which should not be disturbed by the activities of man", and which extend to codes of behaviour precluding the unnecessary movement of stones or even scuffing the ground (Humphrey, 1995: 141). The two forms of social and political power in Mongol society, the chiefly and shamanic, use ideas of landscape entities which embody the notion that places, topographic features and the properties ascribed to them are not derived "from human spirits but [are] simply there" (Humphrey, 1995: 136) (my parenthesis). In other words they are deemed to exist in their own right.

Native American religious systems are centred on the 'belief' that "spiritual power is infused throughout the environment in general, as well as at interconnected special places, and that knowledgeable people are participants in that power" (Theodoratis and La Pena, 1994: 22). The concept of power is indeed difficult to express in the English language, but to use the Mescalero Apache understanding, it is "a spiritual energy or life force that enables the individual to interact with the forces of the natural/supernatural worlds" (Carmichael, 1994: 91). A more insightful explanation comes from the Kiowa Indian and Pulitzer Prize-winning writer N. Scott Momaday. He expresses the relationship of the Native American to the environment as primarily a "moral act of the imagination", which places himself in a relationship to the physical world (Momaday, 1976: 80). But it is much more than that, as such a position derives in part from the Indian's own heritage and tribal culture, handed down over many generations, and put into practice on a day-to-day basis: it is an understanding of "reciprocal appropriation: appropriation in which man invests himself in the landscape, and at the same time incorporates the landscape into his most fundamental experience" (Momaday, 1976: 80).

The core theme of Momaday's explanation is "appropriateness", which we have already identified in hunting and other contexts as a form of 'correct behaviour' to be followed in relation to hunting and collecting food. But it has a much wider relevance, both practical and moral, as Momaday suggests, not necessarily directly religious. It is about what is right within the framework of the relationship between person and environment, as nature is not something envisioned from a distance but is
conceived by the Indian "as an element in which he exists" (Momaday, 1976: 82). The physical and imaginative aspects of the surroundings are combined to form one vision which enables the Indian “to see what is really there, but also to see what is really there” (Momaday, 1976: 84) (author’s italics). This is the way that the sacred aspects of the landscape are revealed. The interesting aspect of this is that Momaday sees attempts by nineteenth-century Romantic poets to ‘experience’ nature as essentially the same thing, that is, to be aware of the sacred reality behind the perceived everyday appearance of things.

In Hopi tribal religion, the role of members of the Kachina societies is carefully to nurture and teach young children to understand the masked kachinas as gods when they are in fact human members of their own community. This charade is maintained for several months before the children are rudely disillusioned with the unmasking of the ‘gods’ at a ceremony and dance deliberately designed to teach them that things are not what they appear to be. As their first religious initiation ceremony it is an event which can be shocking, and bitterly disappointing, cruelly and painfully shattering their illusions carefully prepared by the kachinas (Gill, 1976: 51-4). However, it is this realization which is considered necessary to precede their “appreciation of the full nature of reality” (Gill, 1976: 54). It is to demonstrate the paradox that the sacred can be present in anything, but can remain what it is at the same time as being sacred. It is but another aspect of reality, hence the constant repetition in ethnographic accounts of the mystical or sacred nature of all things, and the codes of ‘appropriate’ or correct behaviour required in people’s day-to-day practice and engagement with their surroundings and quite ordinary objects.

4.8 Sacred places

Sacred sites have sets of rules regarding the behaviour of people in relation to the place, which imply sets of beliefs about the non-empirical world, of spirits, forces, ancestors and gods (Carmichael et al., 1994: 2). For the Wintu of northern California, landscape features held sacred can vary from whole mountains, such as Mount Shasta of the Cascade range, believed to be home to supernatural beings, to rock outcroppings, knolls, and caves, and streams and rivers flowing in cardinal directions, to whirlpools and seepage holes (Theodoratis and LaPena, 1994: 22-3).
Places have different degrees of sanctity: for example some caves are very important, 
only being used to acquire power and spiritual guidance, and need to be approached 
in particular ways, as it is believed that human actions can determine the outcome of 
encounters with the sacred powers of a place (Theodoratis and LaPena, 1994: 24). 
Individuals undergoing vision questing may go from one site to another in “search of 
dreams and spiritual influence”, while other sites are only visited by shamans 
“seeking transcendence” and are avoided by women (Theodoratis and LaPena, 1994: 
23).

Further north along the Fraser River of south-west British Colombia are the Sto:lo 
Indians, nowadays located in a landscape that is both rural and semi-urban, but in 
which the Fraser River is the focus of their identity, and around which most of their 
sacred sites are located in various ways (Mohs, 1994: 187). Their belief system is 
complex and will not be examined in detail here as we are more concerned with the 
places that are considered to be sacred or inhabited by spirit beings. But basically 
there is the Great Spirit, the creator of earth and humankind; secondly, there is the 
deity known as Xa:ls, which is certainly pre-Christian but is often now equated by 
many tribal elders with Christ; and thirdly there are the tribal ancestors (Mohs, 1994: 
189). For our interests the role of Xa:ls is of considerable importance as he put the 
world in order, travelling through the land, enacting “transformations” of people and 
animals and spirits into things and objects now identified as geographical features, in 
some respects analogous to the role of the ancestors in the Dreaming for Australian 
aboriginal people. The most powerful of these places are known as ‘transformer’ 
sites, and can be “bedrock outcroppings, prominences, or large boulders, although a 
few caves, small boulders, and one mountain are also represented” (Mohs, 1994: 
192). These places range in size from one square metre to one square kilometre, 
though they tend to be inconspicuous. The types of sites vary from transformer sites 
above, to spirit residences believed to be inhabited by supernatural forces, questing 
and power sites usually associated with remote mountain areas, through to places 
linked to myths and source areas for materials used in ceremonies. Other than the 
latter most consist of rock formations, springs, ponds and pools.

The similarity in the types of natural locations consistently identified as having some 
kinds of supernatural power and considered sacred is perhaps not too surprising from
the two examples above, but these same elements are found to be significant elsewhere. Amongst the Saami, the indigenous peoples of northern Norway, Sweden, Finland and north-west Russia, similar beliefs and practices are still found. They originally lived as nomadic hunter-fishers, and stock holding and herding was only gradually introduced in the eleventh to thirteenth centuries, although seasonal movement continued in altered form (Schanche, 1994: 122). Christianity replaced the native religions around AD 1000, but the pre-Christian religious beliefs and “religious practices were deeply rooted in space, not as with Christianity, in linear time” (Schanche, 1994: 122). For the pre-Christian Saami the natural features of the land were the focus of their beliefs, which again emphasises the importance of the connection between land and people; that belief is inseparable from the land itself, it is located, residual. This is simply not possible in the same way with a Christian theology, or for Islam, where the centre of belief is in another country, Rome and Mecca respectively. For the Saami, the natural features such as “special rock formations, cliffs, boulders, mountains, forests, lakes, springs and the ocean” all have sacred significance (Schanche, 1994: 122). Sacrificial places were very important, and over 500 are known, many of them being “naturally shaped stones, rocks or caves”, although some places were constructed (Mulk, 1994: 125). Many of the sacrificial places were located in “outstanding formations in the landscape”, and it was suggested these sites may have been deliberately chosen because of their dramatic topography (Mulk, 1994: 125). However, this may put too much of a Western interpretation on the evidence, as many indigenous peoples tend to believe that these sites in some ways ‘choose’ themselves. We shall examine this aspect of belief below, but what is clearly demonstrated by the above examples is the similarity in the ‘choice’ of locations and natural landscape features.

Indeed, as the authors of *Sacred Sites, Sacred Places* (1994), from which these examples have been taken, acknowledge, “one is struck by the remarkable circumpolar congruence in sacred sites and beliefs of northern traditional peoples” (Carmichael et al., 1994: 4). But the similarity of location of sacred sites is also found elsewhere. We have already described the Mongol herders’ relationship to the land, but some places, for example caves, are considered especially important to them. As part of the wider cosmological beliefs where the earth is female and the sky male, some caves are called wombs. Caves are also seen as ways to the underworld,
but only shamans with their ability via ancestor spirits are able to identify and detect the supernatural power which is deemed to inhabit these place (Humphrey, 1995: 157). The sacredness is located and understood as a property of the place, with which people, usually the shaman, can interact.

A further example of the beliefs of the ‘power’ of sacred places comes from Madagascar. The term for the sacred here is *masina*, meaning primarily ‘salted’, but also a “notion of power and efficacy, and of sanctity” (Radimilahy, 1994: 82). The word *masina* is itself derived from the term *hasina*, which is a way of expressing the virtue and strength that go with things and places. Those places that have *hasina* are “characterised by the capacity to produce extraordinary and miraculous events” (Radimilahy, 1994: 82). Again, the qualities of sacredness are ascribed to the earth and everything derived from it: soil, plants, trees and water are endowed with supernatural power, and this phenomena underlies the qualities of *hasina*. Although there is a variety of different types of sacred places, reflecting the rich history of Madagascar, such as many tombs of different periods, the natural landscape features considered important elsewhere, are likewise recognised here. For example, “springs, lakes, caves, upright stones and the roots of trees” especially the tamarinds, and other sacred trees planted next to tombs, are all considered sacred (Radimilahy, 1994: 83). Again there is recognition of the interaction of people and the ‘properties’ or supernatural powers of sacred places, and “the facility that the people have in recognizing sacred places or sites which have a special importance . . . appears to astonish foreigners” (Radimilahy, 1994: 85).

It is clear that there are “broad similarities between peoples from various parts of the world . . . and in the nature of their sacred sites” (Carmichael et al., 1994: 1). Most of these examples are quite recent, but to some extent this reflects the concerns of contemporary ethnographers and anthropologists studying religion and the concepts of place. In the past they were generally more concerned with rituals and ceremonies than with natural locations in the landscape held to be the abode of spirits, although some efforts were made to understand the concept of ‘power’ (Opler, 1935). Power for Mescalero Apaches is ‘holiness’ and is analogous to concepts of power recognised by the Sioux and Crow peoples. Power is not only deemed to be imbued in the landscape, but ‘deserving individuals’ may be offered through dreams and
visions the power to communicate and interact with the forces of the natural or supernatural worlds (Carmichael, 1994: 91). Interestingly, however, there is “a distinction between people who believe in and seek power and those who actually attain it” (Carmichael, 1994: 91).

People come into contact with power or ‘holiness’ at points of “intersection between the physical and spiritual worlds”, for example caves, that is visiting sacred places, or undergoing a transformation, a spirit journey from the physical to spirit world (Carmichael, 1994: 91). Springs emerging from the earth provide contact with the spirit world, and streams are also considered sacred because they are ‘living’ water, in contrast with ponds that are spiritually ‘dead’ (Carmichael, 1994: 93). Again we find the same characteristics of sacred places, and the belief that ‘power’ is the real ‘reality’. What are we to make of this evidence?

4.9 Discussion
The fact that ‘nature’ is now recognised as a social construct, and different conceptualisations of the environment are considered to be historically and culturally specific, raises a number of awkward problems. How do we attempt to study past human societies, for example prehistoric hunter-gatherers and early farming communities, by using analogies from present day indigenous peoples, if basic categories such as ‘nature’ and ‘sacred’ for instance, are entirely specific, rendering comparisons meaningless? Do we simply content ourselves with studying each society in its own right, and accept this as the limits of our enquiries? Some relativist stances seem to suggest this is the case, for example Geertz (1975) and Hornborg (1996). However, as Descola states, there is reluctance to adopt a completely relativist stance as “it presupposes the existence of what needs to be established” (Descola, 1996: 84). These relativist approaches also tend to assume that each and every culture has its own arbitrary way of attributing meaning to the natural world, which everywhere consists of the same features that our own culture ascribes to it. Consequently, not only does this leave the dualist framework unquestioned, but there can also be “no escape from the epistemological privilege granted to western culture”, the ultimate judge of all others (Descola, 1996: 84-5). So in using the cultural construction of nature in opposition to environmental determinism, all we
have done is to build an alternative ‘essentialism’ where everything can be ‘reduced’ to culture (see Horigan, 1988). We should certainly be wary of universal assumptions, and aware of the importance of context, but on the other hand we should not rule out the possibility of making meaningful comparisons.

The above examples of relationships to land and the sacred show real similarities, and have arisen partly because of dissatisfaction with traditional models and universalistic categories eschewed by recent anthropological studies, that have used more personal approaches. However, the “unsuspected convergences and affinities” that have emerged from an apparent “chaos of unconnected ethnographic accounts” have, paradoxically, brought about a “renewed faith in the comparative project” (Descola and Palsson, 1996: 17-8). This is because the questioning of the nature:culture divide also allows room to tackle the connected problem of universals and particulars, which is either based on universal assumptions or seems to deny them altogether. Once beyond the dualist framework, interpretations are no longer bound by being determined by environment or culture respectively, but can be, not cause or effect, but an inseparable process. So it can be argued that “ethnography makes one focus on the particular while a lot of ethnographic particulars kindle anew the interest in comparison” (Descola and Palsson, 1996: 18). This has in turn raised further questions about our own world view, as ethnographic work should not be seen as a one-way street, but a two-way process: we learn about ourselves as we learn about the societies we study.

One of the consequences to arise in recent years from the questioning of the traditional dualist assumptions has been a preparedness to acknowledge the validity of the hunter-gatherer world view (Ingold, 1996). What do I mean by this? Surely we always acknowledge the rights of indigenous peoples to make their case and present their own cosmological beliefs? Certainly, but how do we interpret them? Let us take for example the way foragers and indigenous peoples describe their relationship to non-human animals. As a rule, anthropologists and/or archaeologists do not generally accept the validity of the claims by non-Western peoples that animals are or can be persons or beings in the same way that humans are perceived to be. But this depends on the different ontological assumptions that anthropologists bring to bear, and how they have classified this information. As we have seen, traditionally this has resulted
in the use of the dualist division between natural sciences and social sciences, where the external, physical and (in the case of animals), biological reality is the concern of natural scientists, whereas social scientists such as anthropologists and archaeologists deal with the various cultural constructions of nature. As Ingold has ably demonstrated, “natural scientists study real animals” and cultural anthropologists study “animals of the mind” (Ingold, 1994: xxiii). When we bring these approaches to bear on forager ideas or ontological ‘beliefs’, it is already implicitly assumed that the relationship of hunter-gatherers to plant and animal beings is just one particular cultural construction (Fig. 4.2). Hence the understanding among non-western societies that animals participate in the same world as they do, is already undermined. As Ingold states, how can we claim to compare these ‘beliefs’ fairly when it is the Western view of the separation of humans and animals that sets up the study that they can be viewed as “objects for comparison in the first place” (Ingold, 1994: xxiii). Because we have already assumed that these are purely mental cultural constructions, we have implicitly endorsed our own ontological construction and effectively neutralized any alternative (Ingold, 1994: xxiii).

But can we simply ignore the non-Western view? Ingold poses the overdue question, of what happens if we accept the idea that humans and non-humans animals share the same world, and we approach the non-Western view “with the seriousness it deserves?” (Ingold, 1994: xxiii). For the Cree, “personhood is not the manifest form of humanity; rather the human is one of many outward forms of personhood” (Ingold, 1996: 133). So ‘personhood’, those characteristics which traditionally we have ascribed exclusively to humans, are not seen as ‘added on’ qualities, but “are implicated in the very fact of being alive” (Ingold, 1994: xxiv). Non-human animals are therefore “not just like persons, they are persons “ (Ingold, 1994: xxiv). An important corollary of this is that an animal can have a point of view, and as the Cree claim, a hunt can have two interpretations, of the hunter and the hunted (Ingold, 1996: 135). The hunter-gatherer does not see nature as an adversary, and as we have seen above, is part of a way of being that refuses “to split the mind and speech and artifice into self-nonself” (Martin, 1993: 103), or culture: nature.

As a consequence, we cannot see hunter-gatherers and their environments in purely ecological, technological, economic or social terms, but must think about these as a
whole, with the same pattern of relationships pertaining in resource procurement as in social relationships. It is perhaps too simplistic to say that the hunter-gatherer relationship is based on unconditional giving and sharing ‘as a parent’, and the agriculturalist idea of the environment is reciprocal ‘like an ancestor’, but these are good starting points. One is based on trust and confidence, and the latter based on a ‘give and return’ basis, which involves significantly more doubt that things could go wrong, possibly because of the greater time lapse of a ‘delayed return’. Both seem to be based on a concept of appropriate or correct behaviour with respect to the surroundings in order to continue to partake of the fecundity of the land. In other words the environment, land, or nature, can be offended. This is traditionally where Western approaches have separated economics from religion, but this is to misunderstand the whole nature of the hunter-gatherer relationship to land. What we understand as being ‘nature’ or the environment ‘out there’, for the hunter-gatherer is not ‘out there’ at all, “but part of the same fabric as ourselves, and hence, within”: in essence, self (Martin, 1993: 104).

It is this “native conception of the consubstantiality or interconvertability of places and people” in which each appears “immanent in the other” that suggests aboriginal land tenure for example is primarily spiritual rather than economic (Ingold, 1986: 139). The same could be said for the other examples used. The bond to country is a religious one. Why is this? All these societies have what we call ‘beliefs’ of a sacred or spiritual dimension to the landscape, of another spiritual reality behind the physical reality that we see (Momaday, 1976). Indeed it is so real for hunter-gatherers, and in a different way cultivators, that it is considered more ‘real’ than the physical world itself (Carmichael, 1994: 91). This sacredness, spirit, power, or holiness, is imbued throughout every part of the environment, but can be apprehended at particular places, by people who have the ability to do so. The consistency with which these claims are made demands an explanation, although perhaps the fact that we call them ‘claims’ already shows a disposition on our part to reduce them to culturally-specific beliefs.

For many years our interpretations of religion, magic, symbolism and spirits that pervade non-western people’s world views, have, despite different theories, always been objectified according to western standards. Even when we have criticised the
idea that “western logic cannot constitute a context-independent truth or sole arbiter”
by which religious beliefs and practices can be judged (Hviding, 1996: 167), we have
still partitioned off non-western beliefs as a specific mental construction, of a
particular time, place and culture. Religion has been reduced to culture, the western
view of culture, where the environment is entirely passive and backgrounded. But in
hunter-gatherer and non-western beliefs generally, it is the natural world that is
considered to be alive. The spirits are located in landscape features, and the land
itself is sacred: it has its own force and power. We have assumed this dimension out
of existence and reduced it to a mere ‘belief’. But how do we know this to be the
case?

4.10 Conclusion
This brings us to an important problem, which is only in part one of translation. How
can we accurately reflect or report in our own language, hunter-gatherer concepts of
being and cosmologies which are completely at odds with our own understandings,
yet give these alternative explanations the due respect and claim to validity that they
deserve? It is not just a matter of allowing indigenous peoples a voice. If all we do is
listen, but then interpret what they say in our own categories of meaning (and it is
Western thought which ultimately rules and judges interpretations in academia), are
we not simply reducing their beliefs to so much information, that only has ‘real’
meaning for them? Apart from some enlightened responses from civil authorities (in
America and Australia for example), and archaeologists who are prepared to support
the native traditions in land rights claims, ensuring access to sacred areas rather than
just sites, most of the time their ‘beliefs’ are understood as just that, beliefs,
particular to the respective culture. Interesting certainly, but they are not deemed to
have any wider significance. This chapter has questioned the logic, assumptions and
validity of such a position, particularly in relation to ‘beliefs’ of sacredness and
sacred places. An appreciation of the religious dimension of the hunter-gatherer
relationship to the land is central to understanding their whole world view, and
cannot be separated from economic, social and ecological frameworks. This involves
recognising the limitations of our own beliefs and frameworks and whether we are
right to subsume their understanding within what may be called the polite hegemony
of Western discourse.
But if we are to attempt to use this type of evidence as the basis for understanding the relationship of people to their surroundings in the prehistoric past, then further analysis and explanations are required, not just of ethnographic accounts of sacred places and of a spiritual force in nature, but of the values and assumptions that underpin our own traditional interpretations of these world views. That is the aim of the next chapter.
Fig. 4.1 Western anthropological (above) and hunter-gatherer economies of knowledge and relationship to the environment. (After Ingold, 1996).
Fig. 4.2 A comparison between the 'non-Western' and 'Western' forms of knowledge that assumes the primacy of the Western division of nature: culture. (After Ingold, 1996).
CHAPTER FIVE

THE STUDY OF RELIGION

5.1 Introduction

In previous chapters I have established that the traditional framework of the nature—culture construct, despite its undeniable strengths, is somewhat limited for achieving a more rounded understanding of non-industrial and small-scale land-based societies, especially hunter-gatherers. In highlighting the limitations of the traditional assumptions, I have also attempted to provide alternative ways of understanding our means of perception and indeed, our way of being. Although only examples they at least allow us to think about hunter-gatherers and the analogy with prehistoric societies in a different way. This has been aided by examining ethnographic accounts of present-day indigenous peoples and their relationship to animals, plants and what we would term the inanimate elements of their environment. What has emerged is a belief (or should we say knowledge) of the environment imbued with a force or life of its own. It is clear that this understanding is of fundamental importance for the everyday conduct of people in relation to their surroundings, and constitutes what may be termed rules of ‘appropriate behaviour’ which need to be observed at all times. Why is this?

I shall now examine the roots of this understanding in more detail. It is the aim of this chapter to show that these ‘beliefs’ actually have real validity in their own right, and cannot simply be dismissed as the superstitions of irrational, non-western, peoples. These ‘beliefs’ seem to derive from an apprehension of the ‘sacred’ as a reality. Indeed, I intend to demonstrate that similar beliefs and experiences are found amongst Western populations, past and present. To aid a thorough appreciation of the significance of this knowledge, I shall then subject our own assumptions and interpretations of religious belief and experience to a very brief historical, phenomenological, philosophical, and psychological analysis. However, I hope to show from this assessment that we may in fact have overlooked the real significance
of some aspects of religious activity of fundamental importance for understanding the beliefs, practices, and archaeological record of past societies.

5.2 Definitions, problems of comparison, and translation of cultures

Central to the ethnographic evidence of sacred places is the concept of supernatural power and the idea of the sacred. But what do we mean when we use these words and concepts? The very process of translation may in fact distort the meaning as intended by indigenous peoples. These questions have been posed recently (Hubert, 1994; Tambiah, 1990), but anthropologists have been aware of the problem for much longer (Levy-Bruhl, 1965 [1928]). Certainly when looking at sacred places, we need to see them as part of a wider belief system which incorporates the whole landscape in a vision of varying degrees of sanctity and sacredness. When native peoples say that a particular rock is inhabited by a spirit being, or a place is sacred, it is because they argue that they are seeing what is really there, the reality behind the surface. But because we tend to put a precise meaning on our words, we may misrepresent them, and if we are not careful, “we falsify the primitives’ thought by the mere fact of expressing it” (Levy-Bruhl, 1965 [1928]: 38).

The residual nature or idea of the locatedness of the sacred in landscape features and indeed in the very land itself is difficult to comprehend because of our Christian legacy, which promotes an historical and geographically-remote sense of the holy. As a consequence, it is very difficult for us to appreciate what is meant by the concept of sacredness to people of small-scale non-industrial societies. So when we say we believe it, do we really? Or are we, as Hubert has commented, “simply paying lip service to their belief that it is sacred” (Hubert, 1994: 12). When we interpret their beliefs as effectively specific cultural constructions, are we not simply imposing our own ontological framework onto theirs’, in the process denying their whole concept of the sacred?

Clearly there seem to be similarities between cultures in different parts of the world and the concepts of sacredness and supernatural power. The problem of whether we can make meaningful comparisons between them involves questions of human universals and the relativity of cultures. Do we propose that the ability to recognise
the sacred in the landscape is an innate human quality which is universal and therefore explains all the beliefs in sacred places, or conversely, do we argue that no comparison is possible because each and every culture is historically specific and unique to itself? To separate out these two positions and see them as entirely contradictory is a result of the nature:culture dichotomy. But it is far too simplistic: all humans have similar sensory capabilities in terms of our five senses, and we share a common evolutionary inheritance, in fact our “brain’s oldest heritage is basically reptilian” (Tuan, 1974: 14). That does not necessarily mean that we all use these capabilities in the same way. What we use our senses for and how we interpret those sense perceptions are inextricably bound to context, as in any given culture there may be a greater propensity to use one sense more than another. In this respect, therefore, people in “different societies are ‘unequal’ in performance (even though their innate capacities are the same)” (Tambiah, 1990: 113). Sight is predominant in our own culture, for example (Tuan, 1974: 11). Hence in order to understand the problem of the commensurability and comparability of cultures, we really need to overcome the limitations of the nature:culture dichotomy, or nature:nurture debate as it is often called, and recognise that the concept of human universals “can without contradiction be held to be consistent with the diversity of cultures/societies as an empirical fact” (Tambiah, 1990: 112).

Therefore, we need to acknowledge the beliefs of those cultures as meaningful in themselves and not just as interesting but specific cultural constructions. When indigenous peoples attribute sacredness to a place, are they making the place sacred as we understand the term, or as they claim and believe, simply recognising and acknowledging the power that is already there and residual to the place? These beliefs are in many ways completely alien to our own way of thinking in the Western world: is it possible to translate accurately the sense of the sacred held by so many indigenous peoples into concepts and frameworks that allow them to be compared fairly with our own?

The problem of the translation of cultures is a complex one, but archaeologists, historians and anthropologists do it all the time, from past to present, and from ‘other’ present to ‘our’ Western present. There has been a debate about this problem within anthropology for a number years, usefully and insightfully analysed by
Tambiah (1990). The main themes are that we cannot simply record other cultures and then interpret their beliefs by imposing our own frameworks on them. We in fact need to exercise a little humility or ‘interpretative charity’, so although we do not directly understand what a respondent is telling us, it is better to assume that they are ‘consistent and correct in their beliefs’, as this ‘ethical’ position “maximizes the humanity of the person being interpreted” (Tambiah, 1990: 122) (author’s italics); (Putnam, 1981: 117). It should not be seen just as a matter of ‘charity’ however, but rather, a necessity, that “if we want to understand others, we must count them right in most matters” (Davidson, 1974: 19). This would be the starting point. So to translate the beliefs of another people is a dialectical practice which involves the working back and forth between our interpretations and assumptions and their beliefs, to establish the possibility of a ‘common universal rationality’, which in turn highlights the differences that remain. To argue that translation of ideas and beliefs and concepts is impossible is to deny the practice of translation of languages altogether.

Although a word with an equivalent meaning may not exist in another language, translation of meaning can still be achieved by “describing in detail the contours of one culture’s concepts in the language of another culture, even if the latter does not possess the verbal concept in question” (Tambiah, 1990: 124-5). The translation of ancient texts into modern English prose is so common that we rarely think of the processes involved, but we do not say that these translations are meaningless, we use them because we can understand the overall meaning intended, providing we have a good grasp of the context.

Translation then “implies some measure of comparability, and comparability in turn implies some measure of commensurability” (Tambiah, 1990:125) (author’s italics). These terms suggest a means for measurement and quantification. Comparability and commensurability, though, can only occur after a wider understanding has been attempted: that is, the context, of small-scale land based societies in general, and the sacred relationship to their surroundings. Many of these societies exhibit similar beliefs in their attitudes to the sacredness of the land they inhabit, and these examples have provided a measure of comparability and commensurability. The beliefs have however always been objectified by Western standards, but this is where I take a different approach. In accordance with the consensus in anthropology outlined above, this study therefore accepts as a working assumption the claims and beliefs of...
indigenous peoples with respect to the sacred. It would appear that, if we are to learn about these beliefs, we should be prepared to extend our own understanding, "perhaps requiring a considerable realignment of our categories . . [as] Seriously to study another way of life is necessarily to extend our own" (Winch, 1979: 99). We now need to turn to approaches to the study of religion itself.

5.3 The study of religion: rationality, explanation, and interpretation

Religion in its most general definition is a belief in the existence of a superhuman or otherworldly power, God or gods, who can control and influence human destiny. Accordingly they are worshipped and venerated. For thousands of years the existence of gods or God was not doubted and was an unquestioned fact of life. That some doubt eventually became possible, at least in the Western Christian world, may paradoxically have been the result of the very nature of Christianity itself, which contained within its core the need to define the message, which meant constant revision in the light of new thinking (Tarnas, 1996). The way we study religion and religious thought today is largely the result of the triumph of the Enlightenment and the assault of rationalism on religious doctrine and superstition during the nineteenth century (Tarnas, 1996: 310). However, there were other theories that sought to explain the workings of religious practice more directly, revealing its embeddedness in economic and social life. These are the theories of Marx (1958) [1844], Durkheim (1976) [1915], and Freud (1953a [1907]; 1953b [1927]), whose approaches provided the templates to be used to understand and interpret the religious beliefs and practices of other peoples around the world, and have been and still are (in much adapted form), invaluable assets in the social sciences.

The study of religion is nowadays generally divided between what may be termed explanatory and interpretative approaches. The former attempts to explain religion with recourse to general, usually universal, principles, and the latter tends towards interpretation and description of particular contexts (Boyer, 1993: 6). The explanatory models are still very influenced by the work of, say, Karl Marx, who argued that religious beliefs were nothing more than ideology. As part of the ideological superstructure of a society, they arose from the economic base of the relations of production, so that if the economic conditions changed, so would the
nature of religious belief (Pals, 1996: 147). Religious belief was the product of economic and political oppression, and acted as an illusion with which to banish the problems of day-to-day life (Marx, 1958 [1844]: 41). “It is the opium of the people. The abolition of religion as the illusory happiness of the people is required for their real happiness. The demand to give up the illusion about its condition is the demand to give up a condition which needs illusions” (Marx, 1958 [1844]: 41) (author’s italics). For Marx, religion was a false consciousness, but the importance of his thought lies in its analysis of the relationship between the sociology of thought and beliefs and modes of production, and this is why it is still relevant.

Similarly, the work of the French sociologist Emile Durkheim has also been extremely influential (Durkheim, 1976) [1915]. His idea was that religion is irreducibly social in origin, something shared, by a community with similar beliefs: “religious representations are collective representations which express collective realities” (Durkheim, 1976 [1915]: 10). Religion exists because societies need it, as religious beliefs help to resolve the collective problems of society, and represent classification of the world into categories of sacred and profane. A religion is therefore the “unified system of beliefs and practices relative to sacred things . . . things set apart and forbidden” (Durkheim, 1976 [1915]: 47). Durkheim’s functionalist explanations sought below-the-surface appearance of beliefs for the origin of religion. He did not ask what religious beliefs were about, but what they were for, their function, and what function those beliefs played within society (Pals, 1996: 114). The sacred was not therefore a separate reality or sphere of existence, but assumed from the start to be mere belief and a product of the social. Religion is “society’s consciousness of itself”, the ritual actions in which the community assembles and reinforces their unity (Greeley, 1973: 127). Since the religious encompasses the sacred, religion must also be social in origin (Pals, 1996: 115). The circularity of the argument has been noted, but it does not necessarily remove the relevance of all aspects of his explanation, and the search for social causes for religious beliefs has remained strong in anthropology and archaeology.

The third very influential thinker on the study of religion is Sigmund Freud. In some respects his theory arose from the consequences of the earlier work of E. B. Tylor and James Frazer, the nineteenth-century British anthropologists (Tylor, 1903)
Very briefly, their theory of religious thought and behaviour asserted that it arose from primarily intellectual motives of individuals seeking to explain the mysteries of the world about them, beliefs held to be true in primitive societies but now known to be absurd. All other elements of religion, group belief, ritual and ceremony, were secondary (Pals, 1996: 47). Their work has been widely criticised for an almost complete disregard for the context in which religious beliefs occurred, consisting of intellectual "just so stories" of what might have happened (Evans-Pritchard, 1965: 25). But if religious beliefs were so obviously absurd, why had they continued and persisted for so long? Freud, very aware of the work of Tylor and Frazer, thought he had the answer: the origin of religion did not lie with intellectual constructions to explain the world in a rational way, but arose from the unconscious drives and inner conflicts of individuals, which originate in childhood; religion was in fact an "obsessional neurosis" (Freud, 1953: 21, 33; Pals, 1996: 78).

Freud did more than suggest that religion was partly psychological in origin, he felt that he could explain it away entirely, as "little more than a by-product of psychological distress", reduced to an illusory set of ideas and commitments (Pals, 1996: 79). Nowadays we use the phrase 'all in the mind' unthinkingly, and how often have we perhaps concluded that the religious beliefs of many indigenous peoples are nothing more than a set of illusions set within an appropriate economic and social framework? Such is the power of these reductionist frameworks, that they still exert great influence over our thinking today albeit indirectly and in various mutations.

In contrast interpretative approaches tend to pay more attention to particular contexts in their study of religion than the more universalizing tendencies and deterministic functional explanations above. The most influential work within this field is that of the American anthropologist and social scientist Clifford Geertz (1975; 1983), although the work of British anthropologist Evans-Pritchard (1937; 1956; 1965) is also significant for its concentration on specific contexts. The basis of Geertz’s approach was that ‘culture’ was seen as an objective system, that the collection of symbols, actions, and language of a society, and their meaning, which exist "outside the minds of individual people”, also worked “inwardly to shape attitudes and guide actions” (Pals, 1996: 239). For Geertz, religion was “one of the various systems of
meaning and explanation by which men order and interpret their lives” (Greeley, 1973: 55). Culture and religion are not ‘objectively’ there in the physical sense, but they are ‘there’ as a symbolic system that everybody within society recognises.

Religion differs from the everyday perspective and understanding, as it is concerned with the infinite as the basis of reality, what is ‘really’ there, or the ‘really real’. It is this perspective to which the “symbolic activities of religion as a cultural system are devoted to producing, intensifying, and as far as possible, rendering inviolable by the discordant revelations of secular experiences” (Geertz, 1975: 112). At the core of religion are a culture’s conception of the world, combined with a set of moods and moral ideals, or as Geertz refers to them ‘world view’ and ‘ethos’ (Pals, 1996: 245). These two elements are united symbolically through religious ritual, which “engulfs the total person, transporting him . . . into another mode of existence” (Geertz, 1975: 119-20). Geertz’s method for interpreting religion is termed ‘thick description’, the detailed mapping out in minute details of a culture. The consequence of such an approach is that the search for general laws that apply equally or even differently in various cultures and societies must end, as the analysis of culture is “not an experimental science in search of a law but an interpretative one in search of meaning” (Geertz, 1975: 5). There can be no universally applicable theories to explain religion as far as Geertz is concerned, as all knowledge is ‘local knowledge’ (Geertz, 1983). So although the idea of the supernatural is not directly mentioned by Geertz, he does see “the social and emotional responses people make to their world view” as the key element in religious belief and behaviour, which is in fact a tacit recognition by them of their belief in the existence of the supernatural (Pals, 1996: 271).

Although we have contrasted the largely reductionist explanatory approaches of Marx, Durkheim and Freud with the more particularist and interpretative methods of Geertz, in one way they can be said to represent different examples of a single approach to the study of religion. This is the assumption that religion can be adequately or completely explained by rational methods alone. The reductionist approaches certainly correspond to this description, and although Geertz disagrees with the whole principle of general laws and explanatory models, he still sees his own method as scientific. Geertz also assumes that religion as a system of meaning
can be explained through the process of ‘thick description’ without recourse to positing the supernatural or irrational core to religion. In this respect both explanatory and interpretative approaches are similar. They have automatically assumed the possibility of religion having a ‘real’ irrational experiential core element, simply ‘out of court’ before even starting their analysis. Such ideas are to these approaches absolute non-starters, so it is assumed that they do not even have to be demonstrated. However, if this study is to maintain the principle espoused earlier, of acknowledging the validity of the beliefs of indigenous peoples in respect of the sacred as a working assumption, those approaches described above, for all their strength of analysis and relevant insights, cannot yet be assumed to represent the whole picture.

5.4 The study of religion: religious experience and the sacred

The alternative approach that does assume a non-rational core to religion as the source of the divine, is represented by the work of Karl Barth (1933) [1918] and Rudolf Otto (1950) [1917], whose philosophical outlook derives from nineteenth-century thought. These latter approaches have largely been eclipsed in academic thought in the present with perhaps only Mircea Eliade (1959) continuing to argue the case for the ‘reality of the sacred’. It is important not to overlook this perspective which is not as contradictory to present-day approaches as appears at first glance. This is because it is not just a simple matter of comparison, as in many respects the ‘sacred’ for Barth, Otto and Eliade is not religion in the sense that it is understood by the other approaches. For Barth, Otto and Eliade the sacred is an experience prior to religion, where religion is the secondary phenomenon based on the prior existence of the sacred as an objective reality. Religion does not make the sacred, but the sacred makes religion. In this respect religious ritual is an attempt to contact and influence this ‘objective’ reality, the sacred. Consequently, if we are to attempt an evaluation of these approaches, we need to understand what is meant by the sacred or any other word used to describe it, and how this experience relates to the belief systems of indigenous peoples.

What then are we dealing with? What is the sacred? Literally the “sacred is the intrusion of the transcendent — real or imagined — in our ordinary life” (Greeley,
1973: 153). The concept of the 'sacred' in English is derived from Latin and “defined as restriction through pertaining to the gods”, meaning rules and prohibitions on human behaviour in respect of it (Hubert, 1994: 11). The concept of supernatural power, or the idea that sacred sites have a residual spirit or force that can be good or evil, is more problematic. ‘Power’, however, should definitely be part of our understanding of holiness, but it is not directly comparable, and is often qualified as ‘mighty’, ‘unknown’, ‘mysterious’, or ‘divine’ (Jones, 1961: 52).

For Eliade, the manifestation of the sacred, which he terms hierophany, means “something sacred shows itself to us” (Eliade, 1959: 11) (author’s italics). This need not be because we have sought the sacred, but “that it seeks us out, or that we perchance stumble upon it” (Greeley, 1973: 153). A stone or a tree may be revealed as sacred: they remain stone or tree respectively, but are worshipped because they are hierophanies, because for “those who have a religious experience all nature is capable of revealing itself as cosmic sacrality” (Eliade, 1959: 12). The intrusion of the sacred is not just completely contrary to everyday understandings of reality, rather it is a “revelation of an absolute reality . . . The manifestation of the sacred ontologically founds the world” (Eliade, 1959: 21). This is important as it demonstrates the fact, found in much of the ethnographic evidence, that the sacred is central to understanding the nature of being, as it is only in a sacred world that man “participates in being, that he has a real existence” (Eliade, 1959: 64) (author’s italics). However, there is clearly a number of different types of experiences of the holy, or sacred, which are deemed to have brought the participant in touch with another reality, usually termed religious or mystical experiences.

For example, the nineteenth-century movement called the Transcendentalists asserted that there was a higher faculty of perception, of imagination, “which spontaneously intuited the invisible spiritual reality underlying all natural phenomena” (Meyer, 1986: 14). The experiences of some of the Romantic poets, particularly William Wordsworth and John Ruskin, hint at very similar experiences, but their interpretations and poetry were more often the result of an aesthetic interpretation, often termed the ‘sublime’ in Western discourse. Studies of religious experience suggest that they were less intense experiences but nevertheless part of the same phenomenon (Laski, 1961: 360-4).
The original classic study of encounters with the sacred is that of the psychologist William James's *The Varieties of Religious Experience* (1945) [1902], in which he uses data from many sources, usually of individual experiences and generally drawn from the Christian West, past and recent past, slowly to build a picture of the nature and variety of these experiences. He describes these as if there was in "human consciousness a *sense of reality, a feeling of objective presence, a perception* of what we may call ‘something there’, more deep and more general” than the ways in which we usually create or sense reality (James, 1945 [1902]: 58) (author’s italics). The type and intensity of these experiences exhibit some variety.

James reports the experience of the author Charles Kingsley (James, 1945 [1902]: 375):

"When I walk the fields, I am oppressed now and then with an innate feeling that everything I see has a meaning, if I could but understand it. And this feeling of being surrounded with truths which I cannot grasp amounts to an indescribable awe sometimes . . . Have you not felt your real soul was imperceptible to your mental vision, except in a few hallowed moments?"

As a religious experience this would not seem to have come to full fruition, as his understanding remained tacit. But these experiences are not solely the prerogative of poets or artists. Another more intense state was experienced by the critic John Aldington Symonds, which seemed to be prompted whenever he was relaxed (quoted by James, 1945 [1902]: 376-7). Symonds’ account contains many of the elements of mystical states found elsewhere: the dissolution of the Self in the normal sense, the resulting void, and belief to have been brought to the edge of the abyss. There was also felt to be an inability accurately to describe the experience, again, a common factor, and an element of awe or fear because of the powerlessness that is experienced. One of the main issues that arises from this experience and others, and is implicit in many commentaries and analyses of them, is that our normal and everyday, habitual, understanding of the world has “to be suspended if some special insight into the nature of things, the true self, the purpose of life is to be gained” (Smith, 1983: 253).
Although not present in Symonds’ account, another consistent factor is that “certain aspects of nature seem to have peculiar power of awakening such mystical moods”, as James says most of “the striking cases which I have collected have occurred out of doors” (James, 1945 [1902]: 385-6). As another example demonstrates: “I felt myself one with the grass, the trees, the birds, insects, everything in Nature. I exulted in the mere fact of existence, of being part of it all” (footnotes, in James, 1945 [1902]: 385). In modern psychological surveys these types of experiences are recognised as ‘immanent’ and are characterised by feelings of unity with the surrounding environment (Beit-Hallahmi and Argyle, 1997).

Aldous Huxley’s experience of taking the drug mescal in The Doors of Perception (1994) [1954] is well known, but his ‘revelation’ reminded him of other examples he had read. He realised that his “insights were not into himself and his modest personal history, but into the universe around him” (Ballard, 1994). As Huxley himself described, the significance and importance of his experience allowed him to realise that the flowers he perceived so intensely, signified “nothing more, and nothing less, than what they were” (Huxley, 1994 [1954]: 7). Huxley was reminded of a passage by D.T. Suzuki (an exponent of Zen Buddhism): ‘What is the Dharma-Body of the Buddha?’ asked by a novice in a Zen monastery. (The Dharma-Body is equivalent to Mind, the Void or Godhead.) The master replied, “the hedge at the bottom of the garden”. This is the Beatific vision, Being-Awareness-Bliss. The novice at once understood what these strange words actually meant, that the sacred was present in all things, but in order to know, he had to experience it first. The Dharma-Body was of course the hedge or the flowers that Huxley saw ‘in themselves’ at the same time, but he had to ‘see’ to know (Huxley, 1994 [1954]: 8). To see what is really there and what is really there is a common theme in the ethnographic evidence in Chapter Four.

But what are the differences between the examples described above? Some are quite intense and ‘out of this world’ experiences which involve the dissolution of the Self, while others, though similar, involve feelings of ‘unity’ with the world about them. Others, such as Huxley’s, seem to consist of a more heightened sense of awareness,
of the recognition of ‘things in themselves’, and simultaneous with a reduced sense of Self (Huxley, 1994 [1954]: 11).

How do these experiences compare with those of non-western peoples, for example native Americans? Vine Deloria (an academic and Standing Rock Sioux) suggests that for native Americans, there are two fundamental categories of feeling or emotional response to sacred places, which he terms reflection and revelation, with the vast majority of experiences being of the former kind. The important element for Deloria is land: as something more powerful than ourselves it may help us to cross intellectual barriers. “Land has the ability to short-circuit logical processes: it enables us to apprehend underlying unities we did not suspect” (Deloria, 1993: 30). The significance of the immensity and vastness of the natural world is also a commonly found experience; it is probably not coincidental that Buddha, Jesus, Mohammed and Saint Francis, and many other hermits and saints, sought solitude and refuge in the wilderness, as a necessary precondition for experiencing the holy (James, 1945 [1902]: 328). The importance of the avoidance of the distractions of human society should not be under-estimated in inducing reflection and/or triggering revelation in this context.

Reflection-type experiences are for Deloria, then, something that is brought about through intuition of an underlying reality, whereas revelation experiences are of quite a different order, giving forms of knowledge about things which people could not possibly know purely by reflective thought or intellectual endeavour (Deloria, 1993: 30). These are very rare, and if one analyses Indian accounts of religious experiences, most are in fact of a reflective kind, or experiences derived from training or supervision in religious practice (Deloria, 1993: 32). In revelatory experience, however, the normal categories of space and time dissolve: people as individuals are submerged by something more powerful, they are no longer in control. Importantly, some of “the medicine men and women describe their feelings as intense dread and foreboding”, which is the most important distinguishing emotion between reflection and revelation, as the “feeling of dread cannot be emphasized too much” (Deloria, 1993: 33). As a consequence, Deloria says the really great medicine men and women who understood what revelation actually meant in practice “did everything in their power to avoid the experience”, as they knew it to
be potentially life-threatening, and the experience would drastically change the way they understood normal everyday life thereafter (Deloria, 1993: 34). This is why some individuals who had the ability to attain ‘power’ did not want the responsibility of using it (Carmichael, 1994: 91).

5.5 Rudolf Otto and the Idea of the Holy

These more disturbing descriptions of intense ‘revelatory’ experiences do however accord with the findings of Rudolf Otto, whose famous work Das Heilige, first published in 1917, and later translated as The Idea of the Holy (1950), has been somewhat overlooked, though it is “a work which still makes valid points” (Renfrew, 1994: 48). Eliade clearly acknowledges Otto’s work (1959: 10), but adopts a different perspective, of recognising the sacred as the opposite of the profane. I shall attempt here a very brief survey of Otto’s main argument, as it acts as a good counter-balance to the ‘ready-made’ interpretations of Geertz and Durkheim. Otto had a somewhat lower profile than his more famous contemporary Karl Barth, but they both went against the secular and rationalising tendencies of the nineteenth and early twentieth centuries. Barth recognised the “objectivity and reality of the source of revelation”, the divine, which for him and Otto formed the essence of religious belief, and which cannot be understood in its entirety from a purely rational perspective (Almond, 1984: 4). However, Otto differed from Barth in two important ways.

Firstly, although religion is based on the non-rational core, this core can be rationally analysed, and this is made possible by the connection between the human and the divine, that is the “universal human capacity to experience the divine” (Almond, 1984: 4). The understanding of the non-rational core or essence of religion is deemed to emerge from the interaction of the rational and non-rational elements, or as Otto termed them, the ‘warp and woof of religion’. There is no polarity between these, as there are between Eliade’s sacred and profane, so they cannot be equated in the same way (Avens, 1970: 36). Otto restricts himself to the elements of the experience of the non-rational core of religion, whereas Eliade is concerned with “the sacred in its entirety” (Eliade, 1959: 10) (author’s italics). Otto is concerned that the holy, or divine, is not misunderstood as merely a subjective state of mind, or a psychological
fallacy, rather that awareness of holiness is similar to sense experience (Jones, 1961: 20-3). Otto also stresses the need to be aware of the limits of language, that language by its nature can only describe or convey ideas or concepts within the limits of that language, for example the rational elements of religion can be adequately described (Otto, 1950: 2). But what of the holy?

‘Holiness’ as we now understand the term is imbued with meanings of ‘complete and moral goodness’. But these are the moral and ethical concepts that have been added on as part of the process of ‘schematization’, or the growth of the rational aspects of religion. Originally, the holy meant a “unique original feeling-response, which can be in itself ethically neutral and claims consideration in its own right” (Otto, 1950: 6). What then is the extra element in the word ‘holy’, above and beyond its moral and schematized application? Otto adopts the Latin terms numen and numinous. This is a unique category and state of mind, which is primary and elementary “and irreducible to any other” (Otto, 1950: 7). There are three elements to the ‘numinous’: first, a feeling of dependence, though not in the normal sense; second, a consciousness of a “submergence into nothingness before an overpowering, absolute might of some kind”; and the third element is that the experience cannot be understood verbally, but only through the direct experience of it (Otto, 1950:10). It is therefore outside the limits of language accurately to describe the feeling: it is ineffable. This is a commonly-found factor in reports of religious experiences, for example, native Americans who have revelatory experiences find it “extremely difficult to describe what they know” (Deloria, 1993: 34). Therefore the feeling of “submergence into nothingness” can only be understood as an “immediate and primary reference to an object outside the self” (Otto, 1950: 10). In this respect the ‘feeling of dependence’ can be seen as the latter which “presupposes the former” (Otto, 1950: 11).

Otto describes the numen or numinous with the terms mysterium tremendum fascinans et augustum. Otto means by this that the mysterium tremendum is the object to which the numinous consciousness is directed (Otto, 1950: 13). It describes a kind of fear, distinct from being afraid, for example the Hebrew word hiqptish (hallow), meaning to ‘keep a thing holy in the heart’ and to “mark it off by a feeling of peculiar dread” (Otto, 1950:13). Otto says the Old Testament is rich in expressions
of this type: Exodus xxiii.27 and Job ix.34 and xiii.21. In these examples we “have a terror fraught with an inward shuddering” (Otto, 1950: 14). The equivalent term in Greek is ‘augustus’; and in English, ‘awe’ and ‘aweful’ are in their more special sense close approximations.

The _mysterium tremendum_ can be summarised as inducing a sense of fear and awe, and ‘absolute unapproachability’. But there is another element of _tremendum_ which Otto terms _majestas_-majesty, which he says can be identified in aspects of mysticism as an overpowering force (Otto, 1950: 20). In Buddhist examples it is associated with ‘self-depreciation’, to nullify the self in the face of the _majestas_, leading to “the annihilation of the self” (Otto, 1950: 20). The final part of the sense of the numinous is the element of fascination, or _fascinans_, which is “a strange harmony of contrasts”, by which Otto means that apart from the overpowering sense of dread, there is also an allure and impulse towards it (Otto, 1950: 31). The history of religious experience bears witness to this element of fascination, which Otto states became an end in itself, as people searched for the rapture which pervaded their being through communion with the numinous object (Otto, 1950: 33). The techniques varied from meditation to shamanistic ‘possession’ and ecstasy. Within the Christian tradition, the “wildest and most artificial methods of aestheticism are put into practice to attain it”, and it has been termed the _vita religiosa_ (Otto, 1950: 33).

Otto’s work and philosophy are quite complex, but a more recent study (Almond, 1984) allows some independent assessments to be made. Of fundamental importance to Otto is the need to demonstrate that the numinous experience is the “apprehension of a numinous object”, an experience of something objectively present, a _numen praesens_, that we can feel to be present, and because we can feel it this is enough to guarantee the fact that it is present (Almond, 1984: 82). These views have certainly been criticised as simply too subjective, and that it is impossible to feel an external presence, although again, these criticisms are implicitly based on a nature:culture construct. Hence Almond suggests that the criticism overlooked some important aspects of Otto’s work, and that the “claimed objectivity of the numinous experience is a more complex issue than it appeared to many of Otto’s critics” (Almond, 1984: 83). This is because for Otto, religious feelings are utterly and qualitatively _unique_, they are simply _not_ analogous to anything else, for three reasons.
The first reason is that, because for any feeling there must be a source, for religious feelings this must be a non-rational (numinous) object: "independently aroused unique non-rational feelings require a unique non-rational stimulus – the numen" (Almond, 1984: 83). The second is that the holy or divine is recognised by the sense of an a priori category, which is potentially in all of us, but which is unique only to religious feeling, but in "its operation is a source of cognition" (Almond, 1984: 84). It is this cognition (religious feeling) through which we gain positive knowledge of the numinous. In this sense 'feeling' is not a subjective state, known through 'understanding', but this religious feeling is "an act of reason itself, a mode of knowing" which is quite different and unique from any other form of knowledge (Almond, 1984: 84). The last is, in theological terms, that the objectivity of the religious experience, the numen, is an "experience of divine grace, a receiving of revelation" (Almond, 1984: 84).

These three factors - the uniqueness of the phenomenological experience, its philosophical basis in cognition, and its theological justification - give Otto's argument a degree of complexity that cannot easily be dismissed. It is however circular in that the argument is based on a philosophical assumption of the uniqueness of the religious experience. But it is no more circular than say the ideas of Durkheim, Freud or any other of the major authors still currently used, it simply starts from different assumptions that allow room for other interpretations. To assess this work, I shall now use some more recent analyses of religious experience from philosophical and psychological perspectives.

5.6 Philosophical and psychological analysis of religious experiences

The examples of mystical experiences and the work of Rudolf Otto raise some important problems and questions, and we need to tackle these before proceeding further. Perhaps the main questions that concern us here are, firstly, whether these are universal experiences, that is, if similar experiences have occurred in different times and places, past and present; and second, if this is so, are mystical experiences 'objective' knowledge of a numinous presence, or are they simply 'all in the mind'?
In examining these questions I follow the work of Stace (1960), who provides a detailed but very readable account of the philosophical problems of mysticism.

In assessing the universality of the experience, it is important to recognise that mystical and religious experiences do not only occur to people with religious beliefs, such as Christians, Buddhists or Hindus, but also to people of no particular religious affiliations or beliefs, whom Stace calls “unattached mystics” (Stace, 1960: 38). This point is demonstrated by the results of present-day psychological surveys of religious experiences in modern populations, where for example 23-24% of agnostics, atheists and plain ‘don’t knows’ indicated positive responses to the question ‘Have you ever been aware of or influenced by a presence or a power?’ (Beit-Hallahmi and Argyle, 1997: 80). The characteristics of religious experiences identified by Stace (1960) are still used as guidelines for interpreting survey responses (Beit-Hallahmi and Argyle, 1997; Rosegrant, 1976; Thomas and Cooper, 1978).

Stace’s method was to define some core characteristics that distinguish mystical experiences from any other kind, discounting experiences such as visions, voices, trances, premonitions, rapture and frenzies, but nevertheless identifying a ‘family’ of resemblance’s around a common nucleus of typical experiences (Stace, 1960: 46-7). Within this common nucleus he clearly makes a distinction between ‘extrovertive’ experiences which look outward to the external world, and ‘introvertive’ which turn inward to the mind, and makes a further observation that the former tend to be spontaneous experiences and the latter are acquired, that is they arise perhaps as a result of religious exercises, techniques or disciplines (Stace, 1960: 60). Although there is much in common between the two experiences, the main distinction is the non-spatial and non-temporal aspects of the introvertive kind. This suggests to Stace that the extrovertive experience is of a less complete character, as it has only “a partly realized tendency to unity which the introvertive kind completely realizes” (Stace, 1960: 132). Both types seem to occur in all times, places and cultures (Stace, 1960: 62).

A brief but representative example of extrovertive mysticism is from the Christian mystic Meister Eckhart, who said “all that a man has here externally in multiplicity is intrinsically One. Here all blades of grass, wood, and stone, all things are One. This
is the deepest depth” (in Stace, 1960: 63). This statement does not mean that Eckhart cannot distinguish between grass, wood and stone, but that they are both distinct and identical at the same time. For an example of introvertive mysticism, I quote part of a famous passage by Plotinus, a Greek philosopher, and founder of Neoplatonism (in Stace, 1960:104). Plotinus says:

“Our self-seeing there is a communion with the self restored to its purity. No doubt we should not speak of seeing but, instead of seen and seer, speak boldly of a simple unity. For in this seeing we neither distinguish nor are there two. The man . . . is merged with the Supreme, one with it. Only in separation is there duality. This is why the vision baffles telling; for how can a man bring back tidings of the Supreme as detached when he has seen it as one with himself . . . Beholder was one with beheld.

That the experience is ineffable, or defies description, of there being no distinction between the seer and the seen, is a “denial of all empirical content in the consciousness”, and, perhaps as Stace suggests, is not due to the emotional intensity of the experience, but because of “a basic and inherent logical difficulty” (Stace, 1960: 105). It is this intrinsic paradox, contradiction even, which to many people is enough to discount the reality of mystical experiences altogether.

Indeed it has been suggested that mysticism eludes all attempts at definition because it is an illusion, in short that the term covers “a host of beliefs and experiences which have no relation to each other whatsoever” (Penner, 1983: 95). However, Penner starts from the assumption that there are no direct experiences of the world, and no perception prior to interpretation (Penner, 1983: 89). Since this is precisely what many respondents seem to be saying, he has effectively assumed the possibility out of existence before even starting his analysis. The fact that religious experiences seem to occur right across the denominations and faiths, and beyond, is considered an argument in their favour, and Stace proceeds on the basis of a statement by C.D. Broad that carefully considers the different accounts of mystical experiences and their varying interpretations. Broad concludes that “in religious and mystical experience men come into contact with some Reality or some aspect of Reality which they do not come into contact with in any other way” (Broad, 1953: 173).
Having compared the different types of experiences, and recognized their universal content, we cannot, however, accept the claim that they are ‘objective’ in the way that we usually understand the term as something outside the self, but because these experiences also transcend the individual self, the sacred experience “cannot be regarded as subjective either” (Stace, 1960: 148). ‘Objective’ and ‘subjective’ can in this sense only be used as approximations, but this also means that when mystics have described their experiences in these ‘approximate’ ways they are working within the limits that language imposes on them. As Huxley says we can be beneficiaries and victims of language: it allows us to share knowledge but because of its limits it restricts understanding. What religion calls ‘this world’ “is the universe of reduced awareness . . . petrified by language” (Huxley, 1994 [1954]: 12). So the fact that we find so many accounts and interpretations in “profoundly impressive agreement amounts to very strong evidence that the experiences were not misreported but were actually just what the mystics say they were” (Stace, 1960: 147).

5.7 Discussion

The various experiences therefore tend to show that the subject:object and nature:culture duality upon which our traditional forms of knowledge rest is simply inappropriate for understanding religious experiences. Stace proposes the alternative of ‘transsubjectivity’ (Stace, 1960: 202). However, the idea of transsubjectivity can itself be criticised, because in the final analysis “there is no such thing as an absolutely pure experience without any interpretation at all” (Stace, 1960: 203). Rudolf Otto, in discussing the views of William James on the subject, observes that James cannot approach a proper understanding because of his “empiricist and pragmatist standpoint”, although he acknowledges that James “is sufficient of a realist not to explain it away” (Otto, 1950: 11). The ‘noetic’ quality James attributes to these experiences, and the immediacy of the insight that respondents feel they have had has been called synoptic grasp, “or seeing a meaning ‘all at once’ and without a sense of succession” (Smith, 1983: 268). So although we need to analyse, we should also recognise the limits our assumptions place on the interpretations. A study of religious phenomena and belief implicitly includes questions of the nature of
being, whether acknowledged or not. Whatever or however it is analysed, it does not change the fact that the vast majority of individuals who have mystical experiences “think that its transsubjectivity is not an interpretation but is a datum directly experienced” (Stace, 1960: 204). The evidence does demonstrate that these experiences are found in all times, places and contexts.

The context of the ethnographic evidence of beliefs in the sacred and sacred places is largely that of people engaged in living directly from the natural environment. I suggest that this is significant, as it may allow greater opportunities for reflection and fewer distractions. It would seem to be the context common to many experiences. Although the actual place or setting of these experiences is not mentioned, when they are it is significant that many mystics sought refuge in the wilderness as a means of access to the holy. For Otto the *primal numinous awe* experienced by individuals would have been sufficient on its own to “mark out ‘holy’ or ‘sacred’ places, and make them spots of aweful veneration . . .” (Otto, 1950: 126). James also gives examples of the holy being induced by landscape features or ‘encountered’ in various environmental contexts (James, 1945 [1902]: 386-8). These patterns are repeated in modern psychological surveys where ‘awareness of a sacred presence in nature’ or ‘beauties of nature such as sunset’ are amongst the most common ‘triggers’ of religious experiences in recent research (Beit-Hallahmi and Argyle, 1997: 84). Laski (1961) found ‘art’ and ‘nature’ to be the two most common triggers. The psychological surveys are of course founded on the ontological assumptions of the nature:culture dichotomy. But by removing the nature:culture and body:mind framework we can retain the relevance of the universal and particular aspects of experiences, which enables us to utilise the ethnographic evidence in a much more productive way.

5.8 Conclusion

Whatever we may believe about mystical and religious experiences in the present, or however ‘real’ we think they are, it is incumbent upon us in a self-reflexive discipline, to be aware of the limitations of our assumptions, and be careful about imposing our interpretations on societies whose experience of land we do not share. I have shown that the methods we have traditionally used for interpreting the religious
beliefs of present-day and past societies may well have overlooked their real significance. To call them ‘beliefs’ incorporates our ontological assumptions, and reflects this very problem. Different contexts may give rise not just to different beliefs, but to different forms of knowledge. It is undeniable that present-day non-industrial societies ascribe great significance to the places where religious experiences occur, and this inevitably raises the question of how such experiences and places were interpreted in the past. In this respect I am extending that question to the prehistoric past: how did people interpret such experiences in the Mesolithic, Neolithic, or early Bronze Age, for example? To ask this question obviously involves making a uniformitarian assumption about past human populations, but it is “an assumption which the student of early religion has to make” (Renfrew, 1994: 48).

Religion and ritual were obviously of considerable importance to societies of the Neolithic and Bronze Age, and probably before. We are now in a position to ask some quite different questions of the role of Mesolithic hunter-gatherers in the transition to agriculture, as it is their world view and way of life that had to be transformed into something quite new. Understanding the everyday relationship between people and the land they inhabit, and the reality of the sacred underpinning that relationship, is the starting point for the rest of this enquiry, which focuses on my fieldwork based on Exmoor in south-west England.
CHAPTER SIX

EXMOOR: ARCHAEOLOGY AND PALAEOENVIRONMENT

6.1 Introduction

The chosen fieldwork area for this research is Exmoor in southwest England. Compared with many other regions, archaeological and palaeoenvironmental research has been limited, and Exmoor’s past history is relatively little understood, although its “unresearched nature . . . gives it a very high potential value” (Fowler and Ellison, 1977: 80). The first aim of this chapter is to outline the nature and state of archaeological knowledge, and the second is to describe and analyse the palaeoenvironmental work that has so far been undertaken on Exmoor, and using comparisons with other areas, notably Dartmoor, to provide a context in which to interpret prehistoric land use on the moor. This analysis will concentrate on the Mesolithic-Neolithic transition and later prehistory, comparing evidence with other areas where necessary. Limited though it is, this will at least provide some frameworks for the interpretation of the archaeological data.

Exmoor is an extensive area of upland country in southwest England comprising part of west Somerset and north Devon (Fig. 6.1). It is bounded on the north, at the Bristol Channel, by some of the highest hogsback cliffs in England, rising to 244m OD (800 feet). The main block of higher Exmoor consists of grass and heather moorland, the highest point being Dunkery Beacon in the east at 519m OD (1705 feet), but with large plateau-like areas ranging between 380 and 440m (1300 to 1500 feet). The main divide runs east to west, with rivers draining north and south. The shorter distance to the north and the Bristol Channel coast has resulted in fast-flowing streams such as the Lyn system, in steeply cut, often wooded, valleys, called combes (meaning narrow valley). Rivers flowing to the south-west such as the River Bray and Mole are part of the Taw/Yeo system which enters the Atlantic in Barnstaple Bay in north Devon, while those to the south and east take a still swift but ultimately more leisurely pace. These include the Rivers Barle and Quarme,
combining with the River Exe itself (Fig. 6.2), from which the moor takes its name, flowing into the English Channel via Exeter, 80 kilometres (c.50 miles) to the south.

Exmoor was made a National Park in 1954 because of its scenic value, although agricultural improvement continued apace as with other areas, and several thousand acres of moorland were lost before changing economics and conservation pressure brought a halt (Orwin et al., 1997) [1929]. Much of the moor is enclosed, unimproved or semi-improved grassland, supporting a predominantly pastoral and stock-rearing agricultural economy, with much parliamentary enclosure (of the eighteenth and nineteenth centuries) on the higher slopes. These fields are often bounded by Exmoor’s characteristic beech hedges planted on large earthen and stone-faced hedgebanks. Hill farms and scattered, dispersed, settlements are the norm, with larger villages and small towns such as North Molton, Dulverton, Minehead, Porlock, Exford, Lynton/Lynmouth, and Combe Martin deriving much of their income from tourism, underpinned by the agricultural economy. The combination of moorland, farmland, ancient woodland, fast-flowing streams and the coast provides a rich variety of different landscapes today to be understood and enjoyed by visitors. But our understanding of how this landscape evolved in the past is still unclear.

6.2 Archaeology

Compared with other areas in southern England, such as Wessex, or indeed with other parts of the south-west generally - for example the Somerset Levels, Dartmoor, and Bodmin Moor, with their rich prehistoric remains - Exmoor is the poor relation, and for “pre-medieval times Exmoor is terra incognita in terms of cultural history” (Fowler and Ellison, 1977: 80). To a large extent this has perhaps been due to its different geological base, that of sandstones, slates and grits (see below), which has meant its cultural remains are more subtle, smaller in scale, less conspicuous, and demanding of closer attention. Archaeological attention was, however, for generations directed elsewhere. That is not to say that no work has been done, but it has been sporadic, patchy, with hardly any excavation, and only within the last 25 years has this situation gradually changed.
As long ago as 1879, the antiquary R.N. Worth commented that "The antiquities of this district have never received the attention they deserve, and the Forest [Exmoor] may therefore be commended to the attention of zealous and discreet archaeologists" (Chanter and Worth, 1905: 375). Subsequently, the Rev. J.F. Chanter and R. Hansford Worth (son of R.N. Worth, above) carried out some surveys of Exmoor's unique prehistoric small stone settings (Fig. 6.3), published in 1905 and 1906 in the Transactions of the Devonshire Association (Chanter and Worth, 1905 and 1906). Similarly H. St. George Gray, who had worked with General Pitt-Rivers and later with Arthur Bulleid at the Glastonbury Lake Village excavations, also published surveys of the newly discovered stone circle at Withypool in 1906, and much later, in 1928, of the remains of a fine stone circle on the moorland above Porlock, sadly much degraded since (Burl, 1995: 76; Gray, 1906, 1928). Further work from Gray followed in 1931, publishing the survey of Almsworthy stone setting and the excavation of the remains of a dolmen and large barrow, part of a group at Williton, to the east of Exmoor (Gray, 1931). But apart from the notification of small finds in county journals, no major studies appeared for another 40 years.

In 1970 L.V. Grinsell's excellent survey and overview The Archaeology of Exmoor. Bideford Bay to Bridgwater provided the first starting point for any subsequent research, being an "account of places and things from inspection" through his own fieldwork and extensive collation of all other information then available (Grinsell, 1970: 9). This was followed in 1977 when the Committee for Rescue Archaeology in Avon, Gloucestershire and Somerset (CRAAGS) undertook a survey of the nature of Exmoor's archaeological record with an appraisal of management needs for its future conservation (Ellison, 1977). The nature of the 'resource' was published in the Exmoor Review (Fowler and Ellison, 1977). The survey found that no stone tools of the Palaeolithic were known on higher Exmoor, though some had been found in the valleys of the Tone and Doniford stream to the south and east. The Mesolithic and Neolithic periods were represented solely by a few flint sites, mostly around the edge of the moor, and although some of the stone settings, circles and rows were thought to belong to the late Neolithic, most were considered to be early Bronze Age in date. None had been dated scientifically. Unlike the stone settings, the Bronze Age round barrows and cairns are much more noticeable on crests and summits, and there were approximately 400 known, most dug into and damaged.
There were very few examples of prehistoric field systems and settlement remains, in contrast to Dartmoor and Bodmin Moor (Silvester, 1979: 185), and between 20 to 30 hillforts and hill slope enclosures of the later prehistoric period were then known (Fowler and Ellison, 1977: 78). Roman remains were extremely sparse, comprising only two small coastal fortlets, in contrast to the situation in east Somerset, which was rich with villas, roads and mining activity (Leech and Leach, 1982). The main examples of post-Roman activity were a number of inscribed stones, and some early (Celtic) Christian foundations. Much of the moor had not been attached to any settlements during the Saxon period, and after the Norman conquest Exmoor became part of the Crown demesne and came under Forest law (Hallam, 1978: 38). However, a large number of deserted medieval settlements had been located, mostly farmsteads (Aston, 1985: 85), though not in the Royal Forest area. The medieval and later medieval archaeology consisted of a few bridges, castles, ecclesiastical remains and examples of vernacular architecture. Nineteenth century remains consisted of farmhouses established within the old Forest, after the sale of the Crown's interest and subsequent enclosure and agricultural improvement were carried out (see Orwin, et al., 1997) [1929]. Although the brief list above may suggest that Exmoor's past is unremarkable, whilst "superficially not very distinguished . . . Exmoor's archaeology is distinctive" (Fowler and Ellison, 1977: 79). There are also some possible gaps in the record. Was the absence of Neolithic monuments such as long barrows and causewayed enclosures, real or apparent? The lack of prehistoric settlement remains posed a related question: that is, if Exmoor is different, why? (Fowler and Ellison, 1977: 79).

During the 1980s this picture gradually changed. As the National Park Authority acquired more land on Exmoor, aerial photographic evidence was backed up by a series of landscape surveys for management purposes and many more sites were located (McDonnell, 1980, 1981, 1985a). For every site noted by air photographs, 26 were found by landscape survey: resulting in 2000 new sites in all (Bell et al., 1984: 65; McDonnell, 1985b). This figure highlights the nature of the archaeology on Exmoor, especially of the prehistoric period, where the "scarcity of substantial building stone and the probable use of organic materials with a low survival potential contribute to the generally ephemeral nature of many of Exmoor's structural
monuments from the later prehistoric periods” (McDonnell, 1985a: 28). Subsequently more detailed measured survey followed, for example on a series of prehistoric field systems and settlement remains on Codsend and Hoar Moors at the eastern end of the moor. Here there appeared to be the “surviving elements of a more extensive field system possibly stretching continuously over the south-western flank of Dunkery Hill and thus forming an area of organized landscape of a type familiar on both Dartmoor and Bodmin Moor, albeit here on a much reduced scale” (Patterson and Sainsbury, 1989: 89) (Fig. 6.4 and Fig. 6.5). Some of the field boundaries seemed to be running under the peat, indicative of a considerable age, though the interpretation of the field system was “made extremely difficult by the almost total lack of comparative material on Exmoor” (Patterson and Sainsbury, 1989: 90). Other small areas have also since been found.

The realisation that there was an archaeological resource of considerable potential finally prompted the appointment of an archaeologist to the staff of the Exmoor National Park in 1991, some 37 years after National Park status had been established. Although more work had been done, Veryan Heal, the new Park archaeologist, still had little to start with compared to other areas, and “Exmoor had a reputation as something of a black hole in the archaeological landscape” (Heal, 1995: 54). This may be partly due to Exmoor being split administratively between Devon and Somerset (Fig. 6.6), and consequently Exmoor’s archaeology remained the poor relation to Dartmoor (wholly in Devon) and Bodmin Moor (Cornwall) respectively. Despite greater awareness of the potential locally, in a national context it was still true that Exmoor’s archaeology was insignificant in “the sense that it has yet made virtually no contribution to learning” (Fowler and Ellison, 1977: 80). But the appointment of a National park archaeologist gave new impetus, and coincidentally the Royal Commission for Historical Monuments (England) was already planning a full-scale archaeological survey of Exmoor, beginning a six-year project in 1992 (Heal, 1995: 54). The first subject to be completed was a survey of the stone settings, rows, circles and single standing stones (Quinnell and Dunn, 1992).

As the scale and pace of archaeological work increased, new discoveries were made, both by the Royal Commission and through increased archaeological work from the National Trust, a major landowner on the eastern side of Exmoor. For example, a
survey of ancient oak woodland by Richard McDonnell for the Trust in 1994 located a prehistoric hillslope enclosure and a deserted medieval settlement, which is now subject to a programme of excavation by the National Trust (Isabel Richardson pers. comm. 1998). Radiocarbon dating of finds from mine workings at Cornham Ford near Simonsbath produced dates from the Roman period (they had been known as ‘Roman lode’ for years!) (Veryan Heal, pers. comm. 1998). The picture is gradually improving, and the significant archaeological potential of Exmoor is beginning to get the attention it deserves. A synthesis of the RCHME survey evidence of all periods of Exmoor’s archaeology is to be published shortly.

This brief survey of the state of Exmoor’s archaeology provides a background for an exploration of the environmental evidence. Research into the palaeoenvironmental potential of Exmoor’s landscape has gone on for some time independently of any archaeological work (for example Merryfield and Moore, 1974), but the work of Heal and others has attempted to integrate these two approaches (Canti et al., 1995).

I shall now consider the environmental record from Exmoor, beginning with of the geological foundations of the moor.

6.3 Geology and soils
There are basically three main elements to the development of Exmoor’s geology: these are its composition of Devonian rocks; the creation of high mountains and their subsequent erosion forming deposits; and the role of the Bristol Channel (Straw, 1995: 14). The first element is the Devonian rocks. Unlike the other areas of high moorland in the south-west, Dartmoor and Bodmin Moor, which are granite intrusions, Exmoor is constructed of older sedimentary rocks, such as sandstones, shales, and slates. They were laid down in the Devonian period, between 415 and 370 million years ago (mya). At that time the area was probably south of the Equator, and the sediments that were to form the basis of Exmoor were derived from a mountain range eroded by flash floods in an otherwise hot, desert environment, and deposited on a coastal or delta plain (Pickering, 1997: 81) (Fig. 6.7). The different depositional conditions resulted in the variety of rocks now found on the moor, up to 6000 metres of sediment accumulating during the Devonian period. During the next 100 million years, the Carboniferous, the Coal Measures, were formed, which are
found over a large area to the south and west of the present-day Exmoor in mid-
Devon and north Cornwall (Fig. 6.8). In the late Carboniferous/early Permian period
c.300-280 mya), major earth movements known as the Hercynian Orogeny caused
massive faulting, folding and uplifting to create a zone of high mountains (Straw,
1995:14; Fig. 6.3). On Exmoor this folding created the composition of major rock
types that run from west to east outcropping in parallel bands (Bell et al., 1984: 64;
Grinsell, 1970: 12; Pickering, 1997: 82) (Fig. 6.9).

The second major phase was the massive erosion of these high mountains during the
(New Red Sandstone) Permian and Triassic periods (280-200 mya), when the area
was at the latitude of the Sahara and was a hot desert. The huge amount of erosion
removed perhaps 6,000 metres from the mountain chain and left Exmoor as “just the
stump of a much larger structure” (Pickering, 1997: 82). The red rocks and soil of
Red Devon, Porlock Vale and the lowland between the Quantocks and Brendons
derive from this erosion sequence (Pickering, 1997: 82). These vales are formed by
large faults which also create the “mini-horsts of Bossington Hill and the Quantocks”
(Straw, 1995: 15). The horsts are elongated groups of rocks bounded by faults where
movement is vertical rather than horizontal. At the end of the Triassic the whole area
was submerged and a thin layer of chalk was deposited, only to be completely
removed again during the Tertiary period (Straw, 1995: 14), though this may be the
origin of the poor-quality beach pebble flint found around the coast today.

Although there is a big gap in our knowledge from the beginning of the Tertiary to
the beginning of the Pleistocene, the main activity seems to have been erosion,
caused by wind-blow, as the area was not subsequently submerged. Exmoor was then
a slightly higher area of a more or less continuous plain during the Palaeogene (65-
22 mya), remnants of which also still survive in mid-Devon. It is this plain which
gives the area of ‘higher’ Exmoor its plateau-like appearance, although substantially
dissected by streams. It is the Exmoor feature, of “one upland plain that transcends
all rock types” (Straw, 1995: 15). But this plain was probably dislocated during the
Oligocene (36-22 mya) by faulting which left the area to the west of the moor
significantly lower, and again to the east of the Quantocks by the major Mere fault
(Straw, 1995: 17). These faults have created steep descents from the present-day
Exmoor to the south and west, which did not just depress surrounding areas, and the
inescapable conclusion is that high Exmoor is high because it has been raised by some 150-200m as a horst,” leaving a “rhomboid block” of Devonian rocks defined by fault zones (Straw, 1995:18).

The third major influence is the role of the Bristol Channel. This has had a complex geological history, alternating between submergence and terrestrial conditions until earth movements in the Miocene (20 mya) “caused the channel to sink and be flooded once again along its synclinal axes and within bounding faults or flexures” (Straw, 1995: 15). The flooding caused marine erosion, reducing the northern coastline of the moor southwards by five to eight kilometres from the line of the fault in the Channel (Straw, 1995: 18). This reduced distance meant north-flowing streams cut deeper channels than those did to the south of the main divide.

Fluctuations in climate in the last twenty million years resulted in much chemical weathering, but Exmoor escaped glaciation during the Pleistocene, so erosion has been due to flood and marine action, and freeze-thaw weathering (Straw, 1995: 20-1). These massive geomorphological processes have somewhat masked the underlying geology (Crabtree, 1984: 64-5), resulting in screes on the steeper valley sides, and substantial accumulations of material in valley floors constantly being reworked and transported by streams. There are few rock outcrops and these are generally confined to steep slopes and along watercourses, giving the open moorland above a ‘somnolent’ appearance (Burl, 1993: 88), in contrast with the granite tors of Dartmoor and Bodmin Moor. Erosion processes have also resulted in some characteristic Exmoor landscape features where “discontinuous ridges and knolls of bedrock protrude from the valley floor” (Straw, 1995: 23). These may be formed in two ways: either at a confluence when the tip of a spur is crossed by a fault and is detached by “lateral erosion of a main stream” and its tributaries; or by removal of weaker material around more resistant strata (Straw, 1995: 23). At the maximum extent of the last glaciation 18,000 years BP, sea level was approximately 80-100 metres below present levels and Exmoor was in a periglacial zone immediately south of the ice sheet. Solifluction resulted in thick deposits of eroded material at the foot of the cliffs and extending out onto the continental shelf, which with sea level rises were subsequently transported west to east along the coast (Wilson, 1995: 27-28). These deposits are found beneath areas of submerged forest at Porlock (Canti et al., 2012).
1995), and the west-east pattern is still evident in the changing shape of stones on the Porlock shingle ridge (Wilson, 1995: 28).

The soils of Exmoor exhibit significant variations. For example, the Permo-Triassic origin of soils in Porlock Vale makes it top grade agricultural land, but at higher altitudes the situation is quite different. The higher, continuous, plateau topography of The Chains, for example, "supports one of the country’s most intact blanket bogs at an altitude of 460-487m OD with a maximum peat depth of at least 2.8m" (Maltby, 1995: 33; Merryfield and Moore, 1974). Most of the peat extends east along the higher plateau, although not continuous, with lesser depths of peat below 400m. This information is largely based on the work of Curtis (1971), who established that there is a more or less consistent pattern and sequence to soil development “which reflects differences in drainage and microclimate” (Maltby, 1995: 33). So the summits tend to have peat or peaty gley podzols, that is, badly drained soils. Similarly, the shoulders of upper valley slopes are stagnohumic gleys, and iron pan stagnopodzols, where the iron is leached out of a soil that is water-logged for much of the year. Brown earths are found on steeper and better-drained valley slopes, otherwise the summit rainfall of 1600-2500mm tends to create waterlogging (Bell, et al., 1984: 65). Again in the poorly drained or frequently flooded valley bottoms, there are gleyed brown earths and also peat in localised depressions (Maltby, 1995: 33). Post-glacial soil development and its ability to support different vegetation sequences under varying climatic conditions and human influences will be discussed in the next section.

6.4 Palaeoenvironmental reconstruction: the uplands in England and Wales
Many elements of prehistoric environments can now be reconstructed, including past climate fluctuations, sea level and coastal changes, regional and local vegetation patterns and soil types and quality, and depending on conditions the macro fossil records of contemporary flora and fauna. Many assumptions, both explicit and implicit, are necessary in order to establish methodologies capable of providing data suitable for interpretation (Brown, 1999: 223; Tooley, 1981: 4). Basically these are of the uniformitarian kind, assuming that the general relationships between plants, animals and their environment were the same in the past as they are today (Lowe and
The methods are based on the general principle that different elements, such as soils, pollen, and sediments and the organisms they contain, when deposited, form a stratigraphical relationship, with the oldest at the base, and therefore a chronology is implicit in this continual process of deposition. Under the right conditions, continuous, uninterrupted, stratigraphic layers of material will form, and these can then be sampled by coring. Fossil pollen assemblages can therefore be recovered from the layers of sediment or peat, although their deposition is subject to differential pollen production by different species, variable survival and variations in the transport of different types of pollen grain (Brown, 1999: 243-4). Pollen analysis can give a series of relative dates of vegetational succession that can then be correlated with similar patterns in other areas, which can help to establish regional patterns. However, there are recognised problems with extrapolating patterns over wide areas, and in more recent practice there is a preference for local diagrams and interpretations (Caseldine, 1983: 61; Lowe and Walker, 1984: 163). Absolute chronologies can be established by radiocarbon dating of fossil pollen and correlated with tree-ring chronologies.

The Holocene or post-glacial period has been divided into five distinct climatic periods on the basis of peat bog stratigraphy: the first was the pre-Boreal, with a rapidly ameliorating subarctic climate; then the warm and dry Boreal encouraging colonisation of birch, pine and hazel; the warm and wetter (maritime) Atlantic period; and the dryer (continental) sub-Boreal (Lowe and Walker, 1984: 133). The latter two periods form the climatic optimum, with birch and pine giving way to oak, elm, lime and hazel woodland, chronologically covering the period c.6400 to c.650 cal. BC; then in the sub-Atlantic period there was a deterioration to cooler, wetter conditions. Although this is a somewhat simplistic framework, in northwest Europe many mires or bogs do contain “distinctive horizons . . . and these are believed to reflect major shifts in climatic conditions” (Lowe and Walker, 1984: 133). There are different types of mires, and those favoured for pollen analysis are the blanket bog varieties that often form a continuous cover in upland areas such as, ombrogenous mires, in which the “water table is maintained by high atmospheric moisture levels” (Lowe and Walker, 1984: 132; Moore, 1993: 217). This is because they tend to receive pollen from a wide area, peat accumulation is low, the density of pollen is high, and is direct from the atmosphere, rather than being transported from elsewhere.
by water run-off, such as lake sediments (Moore et al., 1984: 214). They therefore provide excellent potential data bases for reconstructing past vegetation changes and human impact on the environment.

Originally the formation of blanket peats was seen as a result of changing climate, but palynological and archaeological evidence of human activity at the inception of the formation of blanket peat, “which once had been of interest mainly as a source of information on the date of origin of the peat, became a point of interest in its own right” (Moore, 1993: 218). The elm decline at c.3800 cal. BC was often found at the soil/peat interface of core stratigraphy, and initially thought to mark the appearance of Neolithic cultures in Britain, so that peat initiation was dated to the start of the Neolithic. But many different dates have been demonstrated for the onset of blanket peat, which is clearly linked to topography, rainfall and soil factors, and cannot simply be correlated with the elm decline, now thought to be the result of elm disease, perhaps initiated by human interference (Roberts, 1989: 119; Simmons, 1996: 218). But the dates for decline of Ulmus show considerable variation. For example those from a sequence of cores taken at North Gill on the North York Moors vary by at least 2505 radiocarbon years (Simmons, 1996: 85-6). Variation in the dates between the lowlands and upland areas in the Wear Valley in County Durham are “quite clearly distinguishable and the progression of the phenomenon from the lowlands to the uplands through time seems to be a real one” suggesting some human intervention (Young, 1989: 169-70).

Sampling of the boundary between forest and blanket peat in cores provided evidence for the interference in the sequence of natural succession prior to the formation of blanket mire conditions in the uplands (Moore, 1993: 219). Human impact through burning of upland forest, especially the forest edge, during the Mesolithic could be demonstrated, especially in the southern Pennines (Jacobi et al., 1976; Mellars, 1976a). The burning of primary woodland would subsequently encourage regrowth of fresh vegetation, attracting game, and providing a predictable location for hunting activity by Mesolithic populations (Clarke, 1976: 460). It would also favour the growth of shrubs such as hazel, the nuts of which are often found on Mesolithic sites. Recurrent burning over a sustained period could make a considerable and permanent impact on the reduction of tree cover above say 350m,
and with reduced transpiration, leaching and waterlogging of soils would occur, preventing forest regeneration. These effects on the upper edge of woodland could be variable, as burning prevented the upward spread of tree taxa on the southern Pennines (Tallis and Switsur, 1990: 868-9), but improving climate meant that the tree line elsewhere continued to rise (Simmons, 1996: 105).

In the Lake District "changes in the composition of lake sediments just before 5000 bp" (that is c.3800 cal. BC) "indicate an increased precipitation/evaporation ratio which intensified run-off in hilly areas" (Pennington, 1975: 75). But what caused this change? Work on Blea Tarn in Langdale showed that clearance of birch and pine woodland (but not oak) in the catchment area, including the site of the Neolithic axe-factory, occurred at the time of the elm decline (c.3800 cal. BC), and continued until c.3050 cal. BC. Interestingly this phase was "preceded by evidence for a minor and temporary episode of the same kind about 5700 bp" (c.4550 cal. BC) (Pennington, 1975: 77) (author's italics). Radiocarbon dates from the axe factory correspond to this clearance phase, and Pennington concludes that, though the Neolithic clearance was "more intense", it was "similar in kind to one of Mesolithic date" (Pennington, 1975: 77). Increased sedimentation rates in tarns and lakes was therefore caused by increased run-off due to clearance, rather than simply increased rainfall. However, the leaching of soils, "acidification and paludification", were not solely caused by clearance of woodland, but rather human interference was "the factor which tipped the balance so that a natural threshold was crossed" (Pennington, 1975: 80). During the climatic optimum, tree cover would certainly have been extensive (Simmons, 1993: 110), but would almost certainly not have been continuous simply due to climatic factors such as altitude (although the height of the tree line is disputed), natural clearings due to fallen trees and wind blow, unstable slopes and effects of grazing by mammals, and natural clearings. It is these natural clearings that may have been utilised by a process of 'opportunistic exploitation' by Mesolithic and Neolithic populations (Brown, 1997: 140).

The earliest dates for Neolithic activity may come from Lismore Fields, Buxton in Derbyshire, where pollen data show a record of "continuous arable activity since at least 6000 BP" (c.4950 cal. BC) (Wiltshire and Edwards, 1993: 157). This is an extraordinarily early date, pre-dating the evidence for the earliest buildings at
Lismore Fields by nearly 1000 years (Wiltshire and Edwards, 1993: 166). Dating evidence suggests a range of activity from the late Mesolithic to the Iron Age is represented. High frequencies of microscopic charcoal before c.4600 cal. BC may represent hunter-gatherer use of fire, although there is no firm evidence (Wiltshire and Edwards, 1993: 167). The authors suggest that the coincidence of cereal-type pollen in the same profile as woodland, and woodland edge-type taxa, may indicate “that cereal growing and/or processing might have been growing in clearings” (Wiltshire and Edwards, 1993: 164), although they acknowledge that definite identification of cereal pollen is difficult and the evidence is still circumstantial. Soil impoverishment is evident from c.2500 cal. BC, which is attributed to the cumulative effects of many small clearings (Wiltshire and Edwards, 1993: 167-8). There is always a potential problem with the interpretation of evidence from pollen cores, in that assumptions about cultural attributes and associated chronologies from archaeological frameworks can all too easily influence expectations of pollen evidence of particular dates, processes and their interpretation. The result is a potential circularity of argument of which we need to be aware.

6.5 Palaeoenvironmental reconstruction: the south-west peninsula

Palaeoenvironmental reconstruction in the south-west suffers from several limitations compared with other areas. The absence of lakes, largely due to the region being outside Pleistocene glaciation, and therefore of lake sediments, prevents the use of catchment based studies, and the general lack of lowland sites means that interpretations of environmental change rely purely on upland sites (Bell, et al., 1984: 58; Caseldine, 1983: 62). Although the Somerset Levels may seem the obvious exception they are quite unique, and “totally atypical of the rest of South West England” (Caseldine, 1983: 62), so the evidence from the Levels needs to be used in that context. Another problem is that many of the vegetation records and soil changes “are not necessarily time-synchronous even over short distances and the effects of aspect, slope hydrology and subtle differences in gradient cannot be ignored” (Bell et al., 1984: 54). So the evidence from sites tends to be highly localised, and is not always a reliable guide to the surrounding environment.
However, we should not ignore the evidence from the Somerset Levels, as at least it provides us with an indication of the variety of landscape uses at particular times. So rather than looking at individual sites within the Levels which are highly localised, a regional picture from the overlapping chronological framework of three sites, the Sweet Track, Abbots Way, and Meare Heath, has been constructed (Beckett and Hibbert, 1978). Prior to c.3800 cal. BC, climax woodland of oak, elm and lime was dominant on the land above the flooded levels, with alder and birch on the lower, wetter areas. There is no evidence of significant Mesolithic influence on the vegetation (Beckett and Hibbert, 1978: 87). The elm decline is not reliably dated here, but the first major Neolithic clearance phase (herb pollen 30 %) with the presence of grasses, ribwort plantain and mugwort, is dated c.3450 cal. BC to c.2950 cal. BC and involved “intense human activity” including the construction of many trackways across the Levels (Beckett and Hibbert, 1978: 86-9). Perhaps the most significant aspect of the Neolithic evidence is the extent, skill and knowledge of the qualities of different trees and their management, involving coppicing and standard trees (Coles and Coles, 1986). This first clearance, however, is followed by forest regeneration and later only small clearances until c.1850 cal. BC, which starts a long decline in tree pollen. Really extensive clearance finally occurs between c.650 cal. BC and the end of the first millennium, when clearance was “regional and extensive” (Beckett and Hibbert, 1978: 90).

On Dartmoor, there is very little archaeological evidence for Mesolithic activity, especially of the early Mesolithic, before c.7850 cal. BC, and even after this date most of the artefactual evidence is confined to the peripheries of the moor (Caseldine and Hatton, 1993: 120-1). However, the palaeoenvironmental data demonstrate that Mesolithic communities are implicated in the transformation of high moorland into acid grassland and blanket peat (Caseldine and Hatton, 1993: 119). This activity was probably concentrated on the higher ground (above 400m), with only temporary clearance at lower altitudes (Simmons, 1969: 206). For example, at Black Ridge Brook, at 447m OD, there is a “continuous record of microscopic charcoal between 7000 and 6300 BP” (c.5850–5250 cal. BC), that parallels a gradual reduction of tree pollen and an increase in peat-forming plants (Caseldine and Hatton, 1994: 40). This probably reflects the Mesolithic use of fire at the woodland margin.
Similar evidence is found at Blacklane (457m OD), also in the northern part of the moor. The pattern therefore seems to show a concentration of activity around small open summit areas between c.6550 and 5000 cal. BC, resulting in a lowering of the tree line (woodland originally covering the moor almost entirely), and an extension of blanket peat formation (Caseldine and Hatton, 1994: 40-1). The cessation of burning around c.5250 cal. BC has been noted elsewhere in the later Mesolithic (Simmons and Innes, 1987), and may reflect abandonment or a change of use not requiring fire (Caseldine, 1993: 123). The development of the ‘high moor’ can therefore be regarded as anthropogenic, because if “not triggered it was certainly facilitated by the activities of Mesolithic communities” (Caseldine and Hatton, 1994: 41-2). But even this activity may have been localised, as nearby at Pinswell (461m OD) there was still “relatively undisturbed hazel woodland”, with a fern rich understorey (Caseldine and Hatton, 1993: 127-8). This vegetation only became blanket peat after the clearance of hazel was followed by an acid grassland that “has no direct comparison in the Dartmoor of today or of the recent past” (Caseldine and Hatton, 1993: 128). The evidence of Mesolithic interference from Blacklane in southern Dartmoor is similar to that from the northern part of the moor and may be compared to that from the southern Pennines (Caseldine and Hatton, 1993: 130).

However, most of the woodland at the beginning of the Neolithic (c.3800 cal. BC) was still primary woodland of oak and hazel, and the elm decline found in most pollen diagrams from north-west Europe is a relatively subdued feature in the Dartmoor record (Bell, et al., 1984: 58). There are no dates for the elm decline on the moor. The problem for environmental reconstruction is a distinct lack of detail between the early Neolithic and the construction of the reaves (a linear system of field boundaries) in the middle of the second millennium BC, which had to have been laid out in a fairly open landscape after “the natural cover had been largely depleted, mainly by browsing livestock” (Fleming, 1988: 58-9). The limited pollen evidence may suggest a pattern of small, limited, clearances, perhaps linked to the construction of chambered tombs in the early Neolithic, browsing preventing regeneration, and with a slight intensification of clearance in the later Neolithic. By c.2000 cal. BC there may have been pasture on the upper slopes, possibly some cereals at lower levels, within a “shifting mosaic of woodland, scrub, heath, blanket bog and grassland, coming under pressures which probably fluctuated over the
years” (Fleming, 1988: 100). Andrew Fleming’s model is the best yet, but the evidence for the Neolithic remains extremely thin (Caseldine and Hatton, 1994: 42).

In contrast, the Bronze Age offers a wealth of evidence, with stone rows, enclosures, hut circles and of course the reaves. These were laid out in a relatively short period, but there is no evidence of sudden increases in the rate of clearance prior to their construction, which was preceded by use of fences and perhaps hedges (Fleming, 1988: 89). The reaves themselves would probably have supported low hedges. The soils were acid, but there was an absence of peat, iron pans, and excessive leaching, the soils contained earthworms and moles, and were able to support trees and crops (Caseldine and Hatton, 1994: 43). Browsing kept the trees from regenerating and maintained grassland pasture, and the lack of cereal pollen emphasises that this was a mainly pastoral economy (Beckett, 1981), which must have been a socio-economic decision rather than an environmentally-determined one (Caseldine and Hatton, 1994: 43). The vegetation at lower altitudes, however, still varied considerably. The post-reave environmental history is still little understood, and the dates of soil degradation and environmental deterioration in the sub-Atlantic period uncertain (Caseldine and Hatton, 1994: 44).

On Bodmin Moor, tree and shrub pollen rarely rise above 50-60 % of the total in the Holocene, and it has been suggested that this may be due to its exposure to Atlantic weather systems, although it may simply be a reflection of the positioning of sampling sites away from the prehistoric woodland (Bell et al., 1984: 52-3). It is therefore not clear to what extent this evidence reflects natural vegetation patterns, as there was clearly human occupation of the moor in the early Mesolithic activity around Dozmary Pool (Jacobi, 1979: 53). In later periods there is much evidence of enclosure, and excavation of barrows and analysis of the soils showed “considerable spatial variation” in the pattern of soils and vegetation over relatively localised areas (Caseldine, 1983: 72). This is certainly the pattern which we need to be aware of when assessing the moorland evidence in the south-west.

There is a number of good examples in the southwest of the preservation of submerged forests in coastal environments and associated human activity. The best is the midden site at Westward Ho!, which was exposed on the beach in 1863-4. Prior
to subsequent erosion, the stumps of 70-80 large trees, mostly oak but with a few pine or fir, were recorded, having been covered by layers of sand and blue clay (Rogers, 1937: 110). In 1865 “some pointed stakes became visible, some in a semi-circle, others in a slightly curved line 50 feet in length...” suggesting human occupation (Townsend Hall, in Rogers, 1937: 111). This was confirmed with the discovery that the layers of blue clays were mixed with “midden deposits overlain by fen peats and in situ tree stools of the submerged forest” (Bell et al., 1984: 44). The midden contained Mesolithic flint artefacts (Jacobi, 1979: 80), and oyster, mussel and limpet shells (Bell et al., 1984: 44). Terrestrial fauna was also exploited, with the remains of red and roe deer, aurochs and wild boar found widely scattered. The midden deposits have been dated to the first half of the sixth millennium cal. BC (4866 +/- 140 bc Q-1212, and 5005 +/- 104 bc Q-1211), and would have stood at approximately sea level at that time (Bell et al., 1984: 45).

There are further examples along the coast of west Somerset, for example at Blue Anchor, where the mollusc fauna found in the intertidal peat deposit and submerged forest was unlike anything found today in Somerset. These indicated a “shaded swamp woodland with open pools” and were dated using non-marine molluscan assemblages to c.6000 cal. BC (5180 +/- 150 bc Q-1343) (Bell et al., 1984: 45; Wilson, 1995: 28). Submerged forests are also found to the west on the coast of Exmoor at Minehead and Porlock Bay, where recent research has identified a complex series of fluctuations in the coastal geomorphology, some perhaps linked to human impact (Canti et al., 1995).

6.6 Palaeoenvironmental reconstruction: Exmoor

Rising sea levels during the Mesolithic would have had significant effects on the use of coastal resources for the local hunter-gatherer population, and many Mesolithic sites no doubt lie submerged around the coasts (Fig. 6.10), as evidenced by the finds of flint and chert artefacts stratified beneath peat of the submerged forest in Porlock Bay (Boyd-Dawkins, 1870: 141-44). Peat and forest remains are still visible in the intertidal zone at Porlock and the recent work of the Severn Estuary Research Committee (Canti et al., 1995) has attempted to understand the sequence of Holocene vegetation development here. Sea levels rose rapidly from -35m (-30m
OD) MHWST (Mean High Water Spring Tides) at c.8100 cal. BC, to only -8m by c.4950 cal. BC, after which the rate of rise slowed significantly (Canti et al., 1995: 62). It was during the period of rapid rise that the layers of organic material were formed at Porlock, including the peats, and pollen analysis shows that alder carr was established during this time (Canti et al., 1995: 62). During the period of slow sea level rise (c.6550 cal. BC and c.3900 cal BC), there were fluctuations of freshwater (organic) and estuarine (minerogenic) conditions due to abrupt opening or closing of tidal inlets. Subsequently, deposition became purely minerogenic, indicating “periods of low energy, estuarine conditions, established by inlets through a barrier beach” (Canti et al., 1995: 62-3).

It is possible that this change to purely minergenic deposition after 3800 cal. BC is the “result of material eroded from the slopes following anthropogenic disturbance”, although no direct evidence has been found (Canti et al., 1995: 64). An alternative explanation may be a change in the dynamics of the beach structure preventing the growth of alder carr (Canti et al., 1995: 65). Once established, however, the area behind the beach (a pebble ridge) could have been infilled by sediment washed down from the Exmoor plateau by streams discharging through Porlock Marsh. The remains of various channels and water features have been tentatively identified, and after storms in 1998, the remains of an aurochs were discovered in the intertidal zone. The partial skeleton was radiocarbon dated to cal. BP 3687–3399 (2 sigma), an early Bronze Age date (McDonnell, 1998: 1). This is a very late date for an aurochs, although others are known, for example a full skeleton found in a cave at Charterhouse Warren Farm on the Mendips is also of early Bronze Age date c.1550 cal. BC (1295 +/- 37 bc, BM-731) (Tinsley and Grigson, 1981: 219). These examples perhaps paradoxically illustrate the temptation of overstressing the impact of humans on the landscape, when large native fauna could still be found at these times.

Comparatively little pollen analysis has been undertaken on Exmoor, where there are only eight pollen analysis sites, three with radiocarbon dated profiles (up to 1995) (Fig.6.11), compared with 38 on Dartmoor, eleven with radiocarbon dates (Caseldine and Hatton, 1994: 39). The analysis here will concentrate on the two longest dated profiles but with analysis and comparisons of the others. The pollen analysis sites are concentrated on the higher ground above 400m, where most of the deeper peat
deposits are found. There are 8000 hectares of peat more than 10cm in depth on the moor, much smaller than other uplands, and although some is over 2m thick, most is less than 30cm (Straker and Crabtree, 1995: 45). Merryfield and Moore's (1974) profile of 285cm depth from The Chains (488m OD) is dated at 240cm to c.2750 cal. BC (4170 +/- 75 bp UB-821), and later a fuller version was published in which they consider the whole profile to go back to c.3000 cal. BC (Moore et al., 1984) (Fig. 6.12). These base layers include a pre-farming period of an undisturbed woodland phase with pine, birch, alder, elm and oak (Merryfield and Moore, 1974: 440). Prior to the date of 2750 cal. BC, there is a decline in elm and pine, the first appearance of ribwort plantain (*Plantago lanceolata*), and a rise in bracken spores (*Pteridium*), which was interpreted as the first clearances following the arrival of Neolithic communities (Merryfield and Moore, 1974: 439). However, data from another core taken 100m south of the 1974 location published in Straker and Crabtree (1995: 48-9), although undated, provide a good comparison (Fig. 6.13 and Fig. 6.14). Here the lowest part of the profile at 260-247cm shows “tree and shrub pollen in excess of 50% TLP (total land pollen)”, which suggests closed woodland was present or close by (Straker and Crabtree, 1995: 47).

Their next zone (CB2, 247-217cm) would appear to correspond to the initial clearance phase of Merryfield and Moore above. Here, herbaceous values exceed 50% TLP, but the absence of clearance indicators such as ribwort plantain and bracken, and the dominance of grasses, sedge, and heather pollen, “suggest that the increasingly open vegetation was due to the initial spread of blanket peat rather than active clearance by humans” (Straker and Crabtree, 1995: 47). So perhaps we need to recognise the highly localised nature of the pollen record, and the problem referred to earlier of possible circularity of interpretation of archaeological and environmental evidence.

Following these initial ‘clearances’ or increases in herb pollen and grasses, there is a “long recovery phase of c.700 years” (Moore et al., 1984: 224), with a gradual increase in the forest cover. This recovery period ends with tree pollen reaching its maximum of approximately 35% TLP at c.1800 cal. BC (3505 +/- 120 bp UB-820) (Moore et al., 1984: 220). Then there is a significant drop in tree pollen, whereas shrubs such as hazel, ling and heather increase, only to fall again by the end of the
zone (zone ChD) (Fig. 6.12). The detail suggests a succession of alternating
clearance and recovery phases, with an overall reduction in forest cover, attributed to
the arrival of ‘Beaker’ people in the late Neolithic (Moore et al., 1984: 224).
However, there are more significant changes in the next zone that show an initial
drop in trees and shrubs mirrored by a rise in herbaceous pollen. This is followed by
a slight recovery in arboreal pollen, and then a massive rise in herbaceous pollen
with cereals present and becoming more common (Moore et al., 1984: 223). The
base of this zone (ChE) is dated to 2335 +/- 260 bp (UB-819), which at two sigma
“calibrates to 1010 BC-220 AD”, a wide time span which could be late Bronze Age
to early Roman (Straker and Crabtree, 1995: 47). But the date in the mid-point of the
zone is more helpful (2215 +/- 90 bp, UB-817), which calibrates at two sigma to
410-50 BC, the latter part of the Iron Age (Straker and Crabtree, 1995: 47). The
undated profile from The Chains also shows an “intensified clearance” phase, the
magnitude of which suggests correlation with the Merryfield and Moore zone ChE
(Straker and Crabtree, 1995: 47).

So the major clearance phase here seems to be dated to the first millennium BC, with
only interrupted and scattered clearances earlier. The Chains is, however, one of the
highest parts of the moor, so it is not necessarily an accurate guide to what was
happening elsewhere. But basically the pattern of low tree pollen (10 %) had been
established, and would not recover. What these profiles do illustrate is that even the
highest parts of Exmoor had developed a mineral soil supporting woodland cover
before the onset of blanket peat. To the east of The Chains at Warren Farm (420m
OD), the roots of small trees were found preserved beneath the peat (McDonnell,
1985a: 6). An oak tree has since been found in a bog on Halscombe Allotment and
radiocarbon dated to the Neolithic (Veryan Heal, pers. comm. 1998).

The initial date of peat inception on the moor probably varies significantly. For
example, although peat may have started to build on The Chains (488m OD) at
c.3000 cal. BC (Fig. 6.15), on Hoar Tor (416m OD) this may not have occurred until
the second half of the first millennium BC (Straker and Crabtree, 1995: 45). The
shallower but undated profile from Hoar Tor (Merryfield and Moore, 1974: 441)
(Fig. 6.16) also shows an elm decline near the base of the profile, but other features
such as low pine and high lime values indicate that these probably correlate with the
second identified elm decline, located in zone ChE (1010 BC to AD 220, see above) of The Chains diagram (Merryfield and Moore, 1974: 441). The implication is that, while blanket peat was forming on the summits, tree cover “may well have continued for longer on steep slopes and in valleys” (Straker and Crabtree, 1995: 47).

This scenario is supported by work on a buried soil profile taken from the flanks of The Chains, about 1 km south-west of the pollen sites above. The pollen evidence suggested that the development of blanket peat did not begin perhaps until the first millennium BC (Crabtree, 1984: 65). The absence of beech, low elm and tree pollen values generally, indicate a pre-Roman date, but not pre-Bronze Age. It also implied that the mineral soil “did not become acid enough to preserve pollen until at least sometime between the Bronze Age and the Iron Age” (Crabtree and Maltby, 1975: 41). Some support for this came from an analysis of a comparable soil profile at Red Deer, where a flint flake was recovered from “beneath 18cm of peat and a thoroughly indurated iron pan” (Crabtree and Maltby, 1975: 41). Since it was highly unlikely that any movement of the flake through the profile could have occurred without disturbance, the pan and peat probably developed since the deposition of the flake (of late Neolithic or Bronze Age date) (Bell et al., 1984: 65).

Pollen from the soil at the other long radiocarbon dated profile on Exmoor at Hoar Moor was not studied, but the earliest date calibrated to two sigma is 4470-4000 BC (5410 +/- bp I-15, 549) (Francis and Slater, 1990: 5; Straker and Crabtree, 1995: 50) (Fig. 6.17 and Fig. 6.18). Hoar Moor (not to be confused with Hoar Tor, see above), is located at 433m OD, on the south-western flank of Dunkery Hill, at the eastern end of higher Exmoor. Unlike The Chains site, which apart from the barrow has few archaeological features, Hoar Moor is close to a recognised prehistoric field system (Patterson and Sainsbury, 1989), and it was hoped to provide a more integrated interpretation of the environmental and archaeological evidence (Francis, 1986: 5).

The first pollen zone HM A 1 covers the period 6710-3590 BP (4760-1640 BC) and is subdivided into sub-zones HM A 1a and 1b. But overall, this zone corresponds to the mid-Atlantic to mid Sub-Boreal, with the boundary between these two zones (c.3000 cal. BC) correlating approximately with the transition from sub-zones 1a to 1b. At the start of Zone 1a (4760-3180 BC) there is 80 % TLP (total land pollen) tree
and shrub pollen, mostly of birch, but with oak, hazel and bog myrtle, pine, alder, elm and lime present. It is open woodland, with ground cover of “scrub birch, hazel and ferns”, but mire was already beginning to develop, though there was also some gorse, so it was not open mire (Francis and Slater, 1990: 11). There are fluctuations and a significant drop in hazel that continues through the next zone also. On Dartmoor this pattern has been interpreted as caused by an increase in oak, shading out the hazel (Simmons, 1964: 169), but here human activity, specifically “intensified browsing by ungulates” preventing regrowth, is suggested (Francis and Slater, 1990:11). It was not necessary to clear the forest to create browse, and it is suggested that this activity may have already been “well established by the beginning of the sequence” (Francis and Slater, 1990: 11). There is no evidence of land clearance or cereals, including the virtual absence of the clearance indicators Plantago lanceolata and Artemisia. Elm is only present in small numbers and there is a relative decline at c.3450 cal. BC prior to zone HM A 1b, although lime declines at the same time, which could be related to their use as fodder. Overall there is a probable increase in the rate of clearance, plus evidence of a rising water table with increases for alder and willow in zone HM A 1b. But stock grazing and browsing, lopping of elm and lime, plus the reduction in hazel, is the main evidence of human impact (Francis and Slater, 1990: 12).

The second zone covers the period from 3310-1760 bp, calibrated to 1640 cal. BC to AD 240, and shows a “markedly increased disturbance by human activity” with reductions in all tree species except alder, which declines rapidly by the end of the zone (Francis and Slater, 1990: 12). This probably indicates moist soil preventing regeneration, with a corresponding increase in grass pollen. These changes are significant and are indicative of “deliberate clearance and not merely continued grazing activity” (Francis and Slater, 1990: 12). There is also evidence of arable as well as pastoral land use, as the increase in grass grain size “supports an interpretation favouring the presence of local crops” (Francis and Slater, 1990: 12-13). The authors also suggest that the fall in Plantago lanceolata after its initial occurrence and maximum in the zone represent increased farming activity in the latter part of the zone (1990: 13). Overall, this zone (HM A 2) represents a considerable opening up of the landscape with woodland clearance and the probable
appearance of cereals for the first time, although alternatively this may be interpreted
as increased grassland, possibly pasture (Straker and Crabtree, 1995: 50).

Briefly, the next zone (HM A 3, AD 240 to AD 610) shows a continued decline in
tree pollen and a rapid rise in herb pollen at the very beginning of the zone. This rise
is dominated by grasses, and increases for *Calluna, Potentilla, Rumex* and *Plantago*
indicating “extensive clearing” and “the cultivation of cereals in close proximity to
the coring station” (Francis and Slater, 1990:14). However, this changes over the
second half of the zone, with indications of a rising water table and increased soil
acidification; decreases in grass grain size, together with rising values for heathers
and heath plants, suggest that arable gave way to pastoral land use. There may have
been some recolonization of arable fields (increases in ash and beech), and overall
indications of a “good grazing environment for cattle” (Francis and Slater, 1990: 14).
The following zone (HM A 4, AD 610 to AD 840) is characterised by fluctuations
between heather and grass-dominated moorland, with the influx of charcoal
suggestive of swaling (burning of the vegetation) (Straker and Crabtree, 1995: 50).
 These developments may have favoured the use of sheep rather than cattle (Francis
and Slater, 1990: 15).

A second radiocarbon-dated core was taken on Codsend Moor about 800m upslope
to the north-west at 461m OD, providing a useful comparison with the Hoar Moor
evidence (Fig. 6.19). Here the first radiocarbon sample date is 2270 +/- 150 (1-16,
087), with the oldest zone (CM A 1) covering the period 470 to 390 cal. BC, which
suggests that initiation of the blanket mire here was no earlier than this date (Francis
and Slater, 1992: 17). Importantly this zone “bears a strong resemblance to the
uppermost levels of Zone HM A 2 from the Hoar Moor core” (Francis and Slater,
1992: 17). There are reductions in birch, oak, and hazel, but alder reaches its
maximum for the whole sequence. There are also strong increases in grasses and
herbs, which “suggest significant clearance of woodland in fairly moist pedological
conditions” (Francis and Slater, 1992: 17), but no reliable evidence for cereal
agriculture (Francis and Slater, 1992: 26). Clearance continued through the next few
hundred years before some degree of recolonization, but only at half the values
previously.
I am not concerned so much with the later vegetation history of Exmoor, which was largely determined by grazing pressure. There was no woodland left in the 20,000 acres of the Royal Forest after AD 1400 (Hallam, 1978: 38). The establishment of the Royal Forest covering the central moorland area, and use of the moor for pasture by tens of thousands of sheep annually during the medieval period, created a sharp division in vegetation patterns. Heavy grazing pressure has resulted in the Royal Forest being dominated by purple moor grass, and the remainder that is largely heather moorland (Hallam, 1978: 39).

Part of the problem has been the lack of correlation between archaeological sites and environmental sampling. In an attempt to rectify this shortcoming a small project was initiated on the suggestion of Professor Graeme Barker, to take pollen cores close to known areas of archaeological interest. This work formed the dissertation project of an undergraduate, Richard Evans. After consultation with Veryan Heal (Exmoor National Park Archaeologist) and Dr. Vanessa Straker (University of Bristol), the area of Lanacombe on Exmoor was identified as a promising location. There are five known stone settings, various cairns and field boundaries here. During the fieldwork, however, the variation in peat depth became evident and there was difficulty in finding locations with good peat depth close to the archaeological sites. But with the assistance of Dr. Straker two sites were identified and cores taken.

The first site LN(1) (Fig. 6.20) was taken from a valley bottom location (OS 77914244) and pollen was sampled from 96cm of a possible 111cm depth core. As there are no radiocarbon dates for these cores, I shall confine the discussion to the earliest identifiable zones of the core. The earliest zone shows that, although 60% of the plants are herbs, nearly 40% consists of tree pollen, although this falls dramatically towards the end of the zone. It is suggested that this represents an area of closed woodland, but the nature of the decline “indicates that this woodland was under pressure, and that its extent was diminishing rapidly” (Evans, 1999). The increase in herbs, especially grasses (including cereals), “suggests that anthropogenic influences were at least partly behind this decline in tree cover” as other species Asteraceae, Lactueae, Plantago, and Potentilla (weeds, pioneer species) may indicate clearance of land (Evans, 1999). Thereafter the rate of change declines and a vegetation pattern dominated by herbs is established. Being a wetland site, the rate of
deposition of material may be relatively high, but the level of tree cover does suggest that the core extends back to the first millennium BC at least, and may therefore represent evidence of clearance for agriculture.

The second core LN(2) (Fig. 6.21) was taken from the shallow crest (OS 77924292) 200m north-west of the largest stone setting (Lanacombe I). Attempts to find good peat depth closer to the stone settings were unsuccessful. As a result, this core measured only 33.5 cm after extraction, with the lowest sample taken at 32 cm. Herbs are again the dominant plant type and indicate an open environment. Grasses and heather dominate the landscape, perhaps indicative of grazing. However, there is now virtually no heather here, as being part of the Royal Forest the ground cover is predominantly *Molinia*, purple moor grass. The fluctuation in the level of grasses in later zones LN(2)II(A) and (B) “appears so regular that some human activity seems certain” (Evans, 1999). Unfortunately, without radiocarbon dating, interpretations are limited. Although peat depth is no reliable guide to age on Exmoor (as shown by the relative depths and ages on The Chains and Hoar Moor respectively), it seems likely that LN(2) does not have greater time depth than LN(1), and is largely of the historic period. However, these cores do illustrate the variations of evidence, and the difficulties involved in interpretation over relatively small areas.

6.7 Discussion

Both the Hoar Moor and The Chains profiles show extensive woodland growing above 400m before the development of blanket peat. There is no evidence of the use of fire on Exmoor at these early dates (c.3500-3000 cal. BC), although the data do not extend as far back into the Mesolithic as other profiles from Dartmoor or the south Pennines. Again at both The Chains and Hoar Moor sites, there is an elm decline noted in the mid fourth millennium BC, and the initial ‘clearance’ phase on The Chains has been interpreted as evidence of human activity coinciding with the start of blanket peat formation (Merryfield and Moore, 1974; Moore et al., 1984). Although this is similar to data from mid-Wales (Moore, 1973), the southern Pennines (Tallis and Switsur, 1973), and the Lake District (Pennington, 1975), it is recognised that the correlation of an elm decline (and the Neolithic) with blanket peat initiation is not a universal feature, and peat forms at different times in different
places. There is also more localised variation. On The Chains two millennia may have passed between the onset of peat on the plateau surface and the growth of peat on the lower slopes (Maltby, 1995: 34). The implications are that tree cover remained on these slopes until significantly later in the sequence. The elm decline is also perhaps now "generally thought to be connected to an outbreak of elm disease rather than human activity alone" (Straker and Crabtree, 1995: 47). But what do the patterns of clearance tell us about the use of the moor in prehistory, and is it possible to identify the Mesolithic-Neolithic transition in this data?

In many respects the problem is identifying the possible differences between the effects of hunter-gatherers in the Mesolithic period and early Neolithic groups on the vegetation (Francis and Slater, 1990: 17). However, this is making assumptions about what kind of activity was undertaken in the respective periods, what date they may have changed, and whether we can tell the difference anyway. Although we might posit a general date of 3500-4000 BC for the start of the Neolithic period, this does not mean that hunting and gathering simply stopped at this point. Indeed, during this period on Exmoor, hunting and gathering may have continued for a considerable period. Any changes could be patchy and localised. The evidence for Mesolithic alteration of vegetation is inconclusive, although there is archaeological evidence of occupation from this early period in the form of lithic scatters around the edges of Exmoor and the coastal areas (Grinsell, 1970; Norman, 1982).

Throughout the long period covered by the first zone on Hoar Moor (4760 BC to 1640 BC) there are no apparent agricultural clearance phases, and no evidence of arable agriculture right through the profile from the assumed dates for the Mesolithic-Neolithic transition, throughout the Neolithic and into the early Bronze Age. What evidence there is points to a "pronounced drop in hazelnut pollen within Subzone HM A 1a (c. 4760 BC to 3180 BC)", combined with a slight increase in oak pollen (Francis and Slater, 1990: 18). This is not sufficient to suggest closing of the canopy, but rather that browsing may have reduced pollination of hazel, which with elm and lime were possibly used as fodder for grazing livestock (Francis and Slater, 1990, 18). Again, however, there is little archaeological evidence for early Neolithic activity. There are no definite early Neolithic monuments on Exmoor, and the archaeological evidence is again limited to lithic scatters. These are found generally
in the lowland areas, for example between the Brendon Hills and the Quantock Hills, the Somerset levels, and to the south and west in mid-Devon (Griffith, 1994; Grinsell, 1970; Miles, 1976; Somerset SMR 1999). Neolithic stone axes are also only rarely found scattered around the periphery of the moor (Grinsell, 1970: 22-3).

So is the evidence of this long period on Hoar Moor the result of hunter-gatherer activity or early Neolithic herders? Although Mesolithic communities may not actually have created clearings, they may have maintained (and enlarged) those existing natural clearings (Simmons, 1993: 118). These would also have been good locations for early Neolithic herders from the vales perhaps using the uplands in summer “to exploit the sort of rich browse available on Hoar Moor in Zone 1” (Francis and Slater, 1990: 19). The attraction of the same kinds of locations for Mesolithic and Neolithic groups has been noted (Dennell, 1983: 182), although to describe it in this way implies they are different populations, separated either chronologically or culturally, when in fact they may be the same people at different times, or even the same times. Certainly if wild foods were easily available there may have been no need for deliberate clearance (Clarke, 1976; Francis and Slater, 1990: 19).

There are other factors to consider. On The Chains there is a long recovery period in tree pollen after the initial clearance phase. This is quite a common feature and has been called the ‘expansion-regression model’ where the pollen evidence is simply assumed to be an accurate reflection of what actually happened (Edwards, 1993: 140). However, an alternative view put forward by Edwards using the work of Goransson (1984, 1986, 1987) is that the climax woodland was in fact partly coppiced, and that this would nevertheless “produce a pollen rain indistinguishable from that of virgin forest” (Edwards, 1993: 142). In this model early agriculture is actually based on the use of broad-leaved trees. Where cereal pollen has been found during the regression phase (Beckett and Hibbert, 1979), this may “provide support for cereal growing within a forest farming system, rather than agricultural stagnation at this time” (Edwards, 1993: 143). Although there is no regression-recovery phase at Hoar Moor, even on The Chains it would be difficult to demonstrate. But perhaps the most interesting idea is that Goransson “repudiates any notion that the early forest was a malevolent obstacle rather than a shelter and resource for humans and animals”
(Edwards, 1993: 142-3). This accords with the ethnographic evidence from earlier chapters, where nature is not seen as ‘other’ by small-scale societies, but part of the same thing as themselves, which determines the level of environmental intervention and encourages ‘appropriate’ behaviour.

6.8 Conclusion

In many respects, then, Exmoor remains subtly, sometimes strikingly, different from the other southwest moors. The comparatively little amount of archaeological and palaeoenvironmental evidence still leaves a lot of gaps in our knowledge, though this does tend to support the existing view that the lack of early Neolithic monuments is a notable absence (Ellison, 1977: 7; Fowler and Ellison, 1977: 79). The long period of relatively low-level human activity and environmental impact for three millennia prior to the mid-second millennium BC does suggest that the traditional model of early farmers with arable agriculture is not supportable on Exmoor. There is also considerable local variation in peat formation, soil quality and tree cover. The relatively late dates (generally later than Dartmoor) for clearance of tree cover, suggest that arable agriculture did not occur until late in the sequence. The forms of activity that occurred earlier were probably quite unique to the period, do not have modern correlates, and need to be seen in their prehistoric context. We therefore need other explanations. Ellison (1977: 7) suggested that one of the outstanding problems in Exmoor’s archaeological record was identifying Mesolithic and Neolithic activity through the location, distribution and analysis of lithic scatters. The unique standing stone monuments are also a testimony to prehistoric activity, but the context in which they were built is not clear. The aims of the next two chapters are to provide a framework for their interpretation.
Fig. 6.1 Location map of the study area. (Adapted from Ellis, 1989).
Fig. 6.2 The study area: main settlements and relief.
Fig. 6.3 Examples of plans of stone settings by Chanter and Worth (1905-6).
Fig. 6.4 Location map of prehistoric field systems on Codsend Moors. (After Patterson and Sainsbury, 1989).
Fig. 6.5 Prehistoric field system on Codsend Moor (Site 3). (After Patterson and Sainsbury, 1989).
Fig. 6.6 South-west political boundaries showing Exmoor National Park (ENP).
Fig. 6.7 Exmoor and the south-west during Middle and Upper Devonian times. (After Edmonds et al., 1975).
Fig. 6.8 Main physiographic divisions of the south-west. (After Bell et al., 1984).
Fig. 6.9 The geology of the greater Exmoor area. (After Edmonds et al., 1975).
Fig. 6.10 Sketch map of the Bristol Channel coastline c. 5000 BC. (After Grinsell, 1970).
Fig. 6.11 Pollen analysis sites on Exmoor. (After Straker and Crabtree, 1995).
Fig. 6.12 Pollen diagram from The Chains. (Adapted from Moore et al., 1984).
Fig. 6.13 Pollen diagram from The Chains (Part One). (After Straker and Crabtree, 1995).
Fig. 6.14 Pollen diagram from The Chains (Part Two). After Straker and Crabtree, 1995.
Fig. 6.15 Graph showing rate of peat growth on The Chains. (After Moore et al., 1984).

Fig. 6.16 Pollen diagram from Hoar Tor. (After Merryfield and Moore, 1974).
Fig. 6.17 Pollen diagram from Hoar Moor. (After Francis and Slater, 1990).
Fig. 6.18 Summary pollen diagram from Hoar Moor. (After Francis and Slater, 1990).
Fig. 6.19 Pollen diagram from Codsend Moor. (After Francis and Slater, 1992).
Fig. 6.20 Pollen diagram from Lanacombe (LN 1). (After Evans, 1999).
Fig. 6.21 Pollen diagram from Lanacombe (LN 2). (After Evans, 1999).
CHAPTER SEVEN

LITHICS

7.1 Introduction
The main aim of this chapter is an analysis of the lithic record of Exmoor, in the wider context of south-west England, to aid an interpretation of the transition to agriculture in the area. Underlying this assessment is the question of continuity in respect of the relationship between land, places and people. In earlier chapters I have demonstrated the commonplace existence amongst indigenous peoples of quite different understandings of their relationship to non-human animals, their surroundings, and how these beliefs constitute cultural codes of behaviour which have a significant impact on the way they use and exploit natural resources. To incorporate these interpretations directly into the recording of lithic assemblages is not an easy proposition, although it can allow different perspectives for interpretation. Therefore the lithic analysis will generally follow traditional methods of recording and assessment.

I shall start by providing a brief, general background to postglacial lithic technology, and the major chronological horizons that have been identified by previous studies. I then look more closely at selected assemblages and collections from the Exmoor area. Here analysis and recording techniques follow the proven strengths of traditional approaches, but with emphasis on identifying those aspects of the lithic record which allow insights into the way the change from hunting and gathering to farming may have occurred on Exmoor. The four assemblages examined in detail exhibit a good range of possible Mesolithic and Neolithic activity, and a detailed exposition of each collection is followed by a discussion of their relevance to understanding the patterns of change on Exmoor and the south-west peninsula.

The chronology used throughout will be based on the following dates for different periods of British prehistory. The Mesolithic is divided into an earlier and later phase. The early Mesolithic is generally dated from c.10,000 to 8000 cal. BC,
followed by the later Mesolithic to approximately 4000-3500 BC. The Neolithic is again divided into two periods, although some authors still prefer a three-part division of early, middle, and late Neolithic (Darvill, 1987: 25). However, for the purposes of lithic analysis I shall confine the division to the early Neolithic (4000 BC to 2500 BC), and the later Neolithic 2500 to 2000 BC. The early Bronze Age is generally dated to 2000 to 1600 BC. These are obviously the simple divisions that have been used as a framework only, and the real picture is recognised as more complex.

7.2 Mesolithic technology

The lithic technology of Mesolithic hunter-gatherers is generally characterised by blade industries: long, narrow flakes that are a minimum of twice as long as they are wide. Any technology is basically a solution or response to a given situation (Edmonds, 1987: 157), and blades, as a basic tool, could be easily adapted to suit a variety of tasks as and when required. It was therefore a technology well adapted to a nomadic way of life.

The manufacture of blades from a nodule or pebble of flint or chert, or other variety of stone that fractures conchoidally, required the application of quite controlled knapping techniques. For example, a flint nodule or pebble would be prepared for blade production by striking off one end or side of the nodule with a hammer stone to leave a flat surface or platform. By striking the edge of the platform at the right angle and with the required force, a flake could be removed down the side of the nodule. Another flake removed next to the first would leave a ridge between the two removal scars/facets. The platform above this ‘dorsal’ ridge could then be prepared by faceting to isolate an area on the platform to be struck to remove the next flake. This preparation and care of the platform were vital in order to achieve the right length, breadth and thickness of the flake/blade to be removed. The detached blade would have the ‘dorsal’ ridge on its outside, and the bulb produced by the percussion of the removal blow on its inside or ‘ventral’ face. Mesolithic blades were often removed using a ‘soft’ hammer or indirect percussion, where a wooden, bone or antler punch was placed on the platform and struck at the other end. Such a method allowed more
accurate placing of the hammer and control of the direction of force, vital for the repeated production of blades, and maintenance of the core.

The most characteristic of Mesolithic tools is the microlith. These were made from blades by notching across the blade below the proximal end (the end at which it was struck), and then snapping across the blade from the notch. Opinion varies as to the exact method: as Pitts (1980: 21) says, the blade is notched until it snaps, but Rankine (1956: 12) suggests the blade is notched then twisted to produce an oblique or diagonal fracture. The sharp point created by the fracture is therefore at the thickest and strongest end of the blade. The proximal end is discarded and is known as the microburin. Its presence on Mesolithic sites is indicative of microlith manufacture. They are generally interpreted as projectile points but could be used in a variety of ways, not just for hunting (Clarke, 1976). Microliths would usually be retouched, a form of secondary working, which removed a series of small chips along the tip and/or edge of the blade to make the edge thicker and stronger, but still sharp enough to cut or slice. In this way a range of tools could be adapted from a basic blade shape. Broadly speaking, early Mesolithic assemblages tend to have a majority of obliquely blunted microliths and points, are known as ‘Broad’ blade industries (Morrison, 1980: 118) (Fig.7.1), and have similar characteristics over much of north-west Europe (Jacobi, 1976). By contrast, later Mesolithic sites are recognised by ‘geometric’ shaped microliths, such as scalene and isosceles triangles and narrow rods (Fig. 7.2). They are smaller in size and termed ‘Narrow’ blade industries, although these developments should be put in the wider context of environmental changes, such as the rise in postglacial sea levels, which can be seen as the divide between earlier and later stone-working traditions (Morrison, 1980: 132).

The flakes or blades in their basic form provided the cutting edge for different tasks, but were usually adapted into a relatively narrow range of tools, for example scrapers on the ends of blades, fine serration along one edge of blades for saws, or notched to create a point as an awl or piercing tool. Other tools used in the Mesolithic were burins, also known as gravers (Fig. 7.1). These were usually made on a large flake and had the edges thickened and strengthened by the removal of long thin flakes known as burin spalls. Once strengthened, these flakes could be used to incise or cut
bone or antler. Heavy core tools such as adzes and axes, particularly the ‘tranchet’ axe (so called because it is sharpened by the removal of flake transversely across the cutting end), are often found on early Mesolithic sites, but are very rare on later Mesolithic sites. Assemblages with axes, adzes, and burins, are often known as ‘heavy’ industries, as their manufacture required the availability of large quantities of good raw material.

7.3 Neolithic and Bronze Age technology in Britain

Early Neolithic assemblages are still characterised by blade technology: in fact, they tend to have a higher proportion of narrow blades than the late Mesolithic industries, although microliths are absent. However, although blade production continues, this tends “to mask the fact that Earlier Neolithic assemblages generally exhibit a reduced level of control or care” in their use of raw material (Edmonds, 1987: 169). Blades were often retouched as tools, but in many respects, like the late Mesolithic, early Neolithic assemblages remain “non-specific and flexible” (Thomas, 1991a: 18). The continuation of blade production is therefore a good indication of “an economy with a significant element of mobility” (Bradley, 1987: 183). New and visually quite different forms of projectile points first appear. Leaf-shaped arrowheads in a variety of shapes were made in a very different way from microliths (Fig. 7.3). For example, these were fabricated not from a blade, but from broader flake blank, and the sharp edges of the flake were rubbed or slightly crushed to form a narrow blunted edge all around the flake. Using the edges as a striking platform, small thin flakes were chipped away around the flake, sometimes extending across both surfaces. This is known as bifacial flaking.

The later Neolithic assemblages represent a quite distinct change and an intriguing paradox. There is a general shift from narrow to broader, often crudely struck, flakes, indicative of less care attached to preparation of the striking platform (see Pitts, 1978). Flakes often exhibit hinge fractures, that is, where the flake has not detached itself from the core cleanly because the blow was directed into the body of the core, before becoming detached. These flakes have characteristic smooth rounded ends, as opposed to the sharp feathered terminations of properly struck flakes (Andrefsky, 1998: 19; Pitts, 1978: 26). Although there is a broader range of tools, more suited to
specific activities, it is also clear that many flakes from late Neolithic and early Bronze Age sites were used without any secondary working, and then discarded. Those that do display secondary working show a shallower and more intrusive form of retouch than the abrupt retouch of the Mesolithic. The poor striking platform preparation indicates reduced concerns with efficient use of raw material, and perhaps could be said to represent a technology and way of life different from the mobile societies of the late Mesolithic and early Neolithic, perhaps where now “portability was not at a premium” (Thomas, 1991a: 19).

So although most struck flakes seem to have had little care or attention focussed on their manufacture, the paradox concerns the way in which other artefacts have a great deal more attention paid to their style and final form and appearance than in earlier periods. We have already described the methods used to make the leaf-shaped arrowheads of the early Neolithic, and these methods were extended to produce a range of pressure-flaked arrowheads (barbed and tanged in the early Bronze Age) (Fig. 7.4), laurel leaf points and bifacially flaked knives, and polished discoidal knives. These artefacts are often found in important contexts such as burials. The flakes removed by pressure flaking often leave long, narrow and shallow flake scars across the body of the flake and show a heightened concern with the final style and appearance of the artefact compared with earlier postglacial technology, and are more common in early Bronze Age assemblages. Other important changes characteristic of the Neolithic as a whole are ground and polished stone axes, many never actually used, although others clearly were.

7.4 Waste flakes: identifying important changes
We have outlined the technological changes and the chronological horizons between different periods, mainly by discussing the changing nature of the tools that were produced, as these are the most distinctive and recognisable forms. However, the vast majority of lithic material found is the waste, or debitage, created as a by-product of the reduction process. Some of this material was perfectly capable of being used without further modification or secondary working, and analysing the waste material itself can also be a valuable way of gaining insights into prehistoric ways of life. In an important study of the shape of waste flakes from postglacial assemblages, Pitts
(1978) identified two significant horizons in prehistory where “major realignments in the lithic reduction process occurred, resulting in both cases in a fall in the relative quality of narrow flakes and blades produced” (Pitts, 1978: 26). The first is dated by Pitts to the early eighth millennium BC, the transition from the early to late Mesolithic periods, and the second change to the early third millennium BC. These changes, Pitts suggests, are the result of changing patterns of core preparation between these different horizons. Important technological change therefore occurred not at the traditional Mesolithic-Neolithic transition, but before and after. If technology is clearly related to subsistence, this would imply that economic practices did not change significantly at this time.

For example, Pitts and Jacobi (1979) used multivariate analysis of length and breadth values of waste flakes from Mesolithic and Neolithic sites across southern England to demonstrate that the early Neolithic sites had narrower flakes than many late Mesolithic sites (Pitts and Jacobi, 1979: 171). However, their work has been criticised for ignoring more localised factors such as the availability of raw material (Care, 1982: 270). Young and Kay (1989) used discriminant function analysis to attempt to differentiate between late Mesolithic and early Neolithic elements in assemblages from the north-east of England. This did not show the kinds of trends outlined by Pitts and Jacobi, and the availability and quality of the raw material were more important (Young and Kay, 1989: 12-13). But although regionally the basic raw materials are quite different and do impose limitations and variability in the methods required to produce artefacts, the morphological characteristics of the end products are still very similar. Certainly the overall trend in the postglacial period is of a “fall in the quality of flake production” (Pitts, 1978: 33), although it is not a completely consistent and even trend. So despite these regional differences “there seems to have been considerable long-range stylistic conformity” (Healy, 1989: 192).

These chronological changes and typological traits are clearly related to the overall character of risk involved in subsistence activities, but we need to be aware of the limitations of these typologies, the chronology based on them, and their limitations. For example, scatters of material of different ages are common and widespread. The technological differences related to chronological periods cannot therefore always be easily differentiated in these mixed lithic scatters. For example a small early
Neolithic site may be masked by a greater spread of Bronze Age material, with the resulting mixture interpreted as a late Neolithic site as a result (Ford, 1987: 78). The mixed lithic scatters with a high percentage of projectile points from later periods but little contemporary accompanying material, have been interpreted as possible adoption and use of leaf-shaped arrowheads by surviving hunter-gatherers (Young, 1989). Alternatively it is argued that they represent mixing of different periods in the topsoil (Healy, 1989: 191), although ultimately only the excavation of material from stratified contexts will solve this problem. However, Young’s integration of socioeconomic analysis and anthropological evidence illustrates that technology is only one variable in a range of factors influencing prehistoric life, and it needs to be seen in a wider context.

7.5 Technology, risk and settlement: the Mesolithic
The types of locations in which artefacts are found and the content of the assemblages and variations between them may also give us information about the functional role of the artefacts. Work on a large range of Mesolithic sites by Mellars (1976b) identified differences between upland and lowland sites, and from the distinctive elements defined three main assemblage types. Briefly, these were divided into assemblages dominated by microliths (A type sites), balanced assemblages that had relatively equal numbers of microliths to scrapers (B), and scraper dominated sites (C).

For example, early Mesolithic sites tend towards uniformity of tool types, and fall into the Type B ‘balanced’ assemblages (Mellars, 1976b: 395). Type A microlith-dominated sites tend to be later Mesolithic in character, and “exhibit a much greater degree of variability” between sites, particularly in the dominance of one microlithic form (Mellars, 1976b: 395). The change from balanced to microlith-dominated assemblages, broadly earlier to later Mesolithic, reveals a significant shift in the type of sites that were being formed, and suggests important changes in the pattern of settlement, hunting and food procurement (Myers, 1987:143). There are also greater numbers of microliths found, which is indicative of a change in the hunting technology from earlier periods. It is what Myers terms “the replication of component function” (1987: 145), and how incorporation of many elements of the
same type (microliths) in a component tool, may be interpreted as a "concern for the enhancement of weapon reliability" that may reflect significant changes in the pattern of subsistence (Myers, 1987: 145). So these developments may represent a response by later Mesolithic groups to changes in the patterns of 'resource procurement'. Instead of identifying prime locations for intercepting potential prey animals, people modified their technology to cope with changing environmental conditions and a practice of encountering prey. The later Mesolithic microlith-dominated sites therefore represent attempts at "accommodating this uncertainty whilst ensuring that weapons were capable of functioning at short notice" (Myers, 1987: 145).

7.6 Technology, risk and settlement: the Neolithic

The subsequent Neolithic technological changes can also therefore be seen as part of the response to a way of life in which the character of risk had changed. The change in technology from narrow blades to broad flakes, from the early to late Neolithic, is paralleled by other developments. There is a big increase in the number of sites, and in the spread and amount of material found, plus less reliance on retouched flakes, but also a greater range of artefacts produced (Bradley, 1987: 182). These changes in the functional efficiency of tools with less care paid to their production is likely to be the result of the changing nature of the risk involved in subsistence needs for pastoralist and agricultural groups, and their "alternative means of coping with risk" (Edmonds, 1987: 166). Within a pastoralist or agricultural economy, therefore, "the extent to which stone tools can influence the reliability and efficiency of resource procurement through the prevention of loss is significantly reduced" (Edmonds, 1987: 166). Although the portability of lithic tool-kits is still required for pastoralist economies, there may be less need for standardisation or specialisation or technology capable of immediate adaptability.

The technological changes from the early to later Neolithic are paralleled by similar changes across the range of Neolithic material culture. Widely similar traditions in both monument building and artefact types attest to a "complex, fluid and far-reaching network of communications" (Healy, 1989: 193). The social dynamics and organization of this culture were probably characterised by small-scale family-
orientated social groups meeting on a seasonal basis with other groups, probably as part of range of herding and/or pastoralist activities. Therefore the overall similarity in material culture, including lithic technology, "is more comprehensible than it would be in a more completely sedentary society" (Healy, 1989: 194). Regional distinctions and the growth of more individualised forms of material culture would seem to be the consequence of later more localised economic activity and agricultural settlement patterns.

7.7 Raw materials
But whatever the form of economic and social activity in prehistory, communities always needed supplies of raw material for knapping and tool making. The geology of the British Isles determines that the supplies of flint or chert are not evenly distributed, posing potential problems for communities in parts of the country where there is no naturally occurring flint. It is not necessarily the case that the best quality stone will always be chosen, as distance from source means "different materials will have different associated procurement costs" (Edmonds, 1987: 163). Therefore along with the use of raw materials, "the extent to which procurement is 'embedded' within other tasks is also related to the degree of risk" (Edmonds, 1987: 164). As we have seen above, the element of risk and how prehistoric communities countered the problem through technology differ significantly for hunter-gatherers, pastoralists and agricultural societies. So there are the obvious differences in the potential problems of access to raw material between mobile and sedentary populations.

In the Mesolithic period, when little or no quarrying is known, raw material was obtained by surface collection. But the supply on the surface probably represented a finite resource, and "over some 8000 years of exploitation, some supply points would have been worked out", a problem potentially compounded by loss of beach flint due to sea-level rise (Pitts and Jacobi, 1979: 174). The evidence from Pitts and Jacobi does show a fall-off in the quality of narrow blade production from the late Mesolithic sites analysed and they equate this reduction in quality to the lack of availability of good quality flint. If such a pattern can be demonstrated in the south-east of the country, then it may well indicate that problems in other parts of the island such as northern England and the south-west peninsula may have been considerably
more acute. Certainly in areas where good quality flint was scarce it was brought in from elsewhere. There is evidence that flint was transported as nodules, unworked pebbles, or preforms in the case of axes, flake blanks or even finished implements (Healy, 1989: 188). Distances may be, say, 50 km from source, for example the north-east coast to the upper Wear valley, or 90 to 160 km away for flint found at Carn Brea in Cornwall derived from west and east Devon respectively (Healy, 1989: 189).

Agricultural communities may tend to rely on what is available to them around their residential area. Reduced patterns of mobility may mean that access to sources of raw material outside their immediate area is more restricted because it cannot be so easily assimilated into other activities (Edmonds, 1987: 167). Therefore a measure of the distance to raw material sources may be a more accurate indication of the “costs of procurement for sedentary groups than they are for more mobile communities” (Edmonds, 1987: 167). They can therefore use local resources; make special trips to distant sources; or use exchange networks (Edmonds, 1987: 167).

However, all of these arguments assume prehistoric peoples to be thinking along rational lines, making decisions based on an analysis of costs and benefits, and assessing risk by purely economic and utilitarian means. But the ethnographic evidence in earlier chapters demonstrated that hunter-gatherers and small-scale societies generally do not make decisions, or understand risk, purely in these terms. Nature was not seen as an adversary, but as part of the same thing as the hunter, and hunting and eating animals were understood as part of a circular and reciprocal relationship. The element of risk was always present in the background, but the threat to subsistence was only deemed to arise if codes of appropriate or correct behaviour were broken. These codes derived from the religious and spiritual beliefs of people and communities and their relationship to the land. If we are to understand the variation in lithic assemblages over time, then we also need to “attach equal importance to aspects of economic and social relations which have little or nothing to do with the maintenance of subsistence security” (Edmonds and Thomas, 1987: 187).

Perhaps this should be qualified by saying aspects of religion that have traditionally had nothing to do with subsistence, should be included in the equation. Therefore technology, risk, and subsistence practices need to be seen as part of the wider web
of social, economic and religious practices. With these parameters in mind we can now assess the lithic record from the south-west peninsula and Exmoor.

7.8 Raw material sources in the south-west peninsula

The most extensive source is Greensand chert, which forms the tops of the Blackdown Hills in south Somerset and east Devon (Fig. 7.5). This material comes in a variety of colours and different qualities, and is quite widely found not just on the Blackdowns but in the river and gravel deposits of the surrounding areas. There are other sources of chert on many of the hilltops of east Devon, for example the Haldon Hills, and occasional deposits of poor quality flint capping the hills (Berridge, 1985:1), but these deposits tend to be small in size. There may also be some minor finds of flint in a few of the gravels and valleys of east Devon, although once again these are predominantly of chert (Silvester et al., 1987:8). Portland chert, from the Isle of Portland in Dorset, which is black in colour and with a distinctive soapy feel, is only occasionally found in the south-west peninsula, but may be important in the context of exchange networks. Because it is found in very small numbers of artefacts, which can be counted on an individual basis, it cannot really be considered as a significant source material for the purposes of this discussion (Darvill, 1987:46; Palmer, 1977).

The only source of good quality flint for the whole of the region is Beer Head, where the most westerly extension of the southern chalk abuts the English Channel coast 20 miles (32 km) east of Exeter. Here fine quality nodular flint of black to dark grey and/or mottled colouration is available in large quantities, either from eroded blocks of chalk with flint from the beach, or from the hilltop above, although we must remember that the shoreline would have been different in earlier in the Holocene. Care (1982) has attempted to trace the development of its exploitation through the Mesolithic-Neolithic transition, and we shall look at the varying contribution Beer Head flint makes to south-west assemblages during the period.

In north Devon there is one known outcrop of flint, at Orleigh Court, four miles south-west of Bideford. This is a complete surprise, as geologically this is an area where the hills are of a hard sandstone, the valleys consisting of more easily eroded
soft, sandy shales (Simpson and Rogers, 1937: 299). The flint outcrop covers a small area of no more than three-quarters of a square mile “covered by a gravel deposit of doubtful age” at about 200 feet OD (60m) (Simpson and Rogers, 1937: 299). This area is now partly ploughed, but the only accessible outcrop is in the grounds of Orleigh Court. The gravel is of a red/brown colour, and the nodules are “of a type which could have been derived only from the chalk” (Simpson and Rogers, 1937: 299). The flint varies quite widely in colour, the most common being grey to blue/grey, and yellow, but other colours including a reddish grey are also found (Simpson and Rogers, 1937: 300-1). However, its main significance lies in the fact that, apart from beach pebble flint, “this is the only source of flint in the locality and very poor quality it is” (Gardner, 1957: 166).

Apart from good quality beach derived flint from Cornwall, the beach pebble flint is nearly always small in size and of poorer quality, with more internal fracturing, than the nodular flint from Beer Head, but it is much more widely available, and an hour or so spent wandering along north Devon beaches, will provide at least a handful of small irregular pebbles, which when knapped, reveal colours of dark to light grey. Beach pebble flint also has quite a different cortex from nodular flint. There are raised beaches further west down the peninsula, especially to the west and north-west of Falmouth in Cornwall, and it is noticeable how many of the later Mesolithic sites in the area are found on or close to these formations (Jacobi, 1979: 74). The raised beaches provide a source for other types of stone, for example siltstone pebbles for grinding, and sandstone pebbles from north Devon, and the Bunter beds of the Exe valley have been used for so-called ‘pebble mace-heads’. In the Neolithic, Cornwall was also the source for many ground and polished stone axes, which have been found widely dispersed around the country. It can be seen, however, that apart from Beer Head, the main sources in the south-west are Greensand chert (which is a much more difficult stone to knap than nodular flint), and beach pebble flint, which tends to be small. Beer Head is itself a small area and in many respects peripheral to much of the south-west peninsula. We can now begin to fill in the pattern of exploitation and settlement in the south-west from the early Mesolithic to the Bronze Age.
Raw material use in the south-west: the early Mesolithic

One of the early Mesolithic sites in the region is Dozmary Pool on Bodmin Moor in Cornwall. Many of the finds from this site were in the last century, especially 1866, when an exceptional drought drastically reduced water levels. This material has been commented on by Wainwright (1960), but Jacobi (1979) re-assigns some of his findings. The defining characteristic, though, is the use of “particularly distinctive high-grade, translucent, honey and dove-grey and black flints for tool manufacture” (Jacobi, 1979: 50) which may derive from beaches in Cornwall. However, this flint provides a sharp contrast to the use of Greensand chert and chalk flint used on early Mesolithic sites in Somerset (Jacobi, 1979: 50), to which there seems to be a distinctive pattern.

These early Mesolithic sites with typological affinities to material from Dozmary Pool are Middlezoy and Shapwick, east of the River Tone in Somerset (Fig. 7.6). Both display artefacts associated with the ‘heavy’ industries of the early Mesolithic, such as tranchet axe elements, burins, and non-geometric obliquely blunted microliths (Wainwright, 1960: 195). The raw material at Middlezoy consists mostly of high quality chalk-derived flint but with a significant percentage of Greensand chert, and is therefore representative of the wider pattern of exploitation of these materials in the Somerset area. For example, in the east of the county and the Mendip Hills, assemblages are dominated by nodular flint, presumably obtained from the Wessex chalk. Sites on the Levels such as Middlezoy used chalk flint from the east and Greensand chert from the Blackdowns to the south-west and from river gravels, but beach pebble flint is entirely absent from these sites east of the River Parrett (Norman, 1982: 17). But to the west and north of the Rivers Parrett and Tone respectively, in west Somerset and the Quantock Hills, early Mesolithic assemblages at Greenway Farm (Fig. 7.7), Westleigh Farm near Broomhill on the Quantock Hills, and Fideoak Park, on the floodplain of the River Tone east of Taunton, are dominated by Greensand chert (Norman, 1975). The remainder is mostly chalk flint with a tiny percentage of beach pebble flint. Apart from Fideoak Park material, all the stone was introduced to the sites and non-local. The colours of the chert at Fideoak Park varied from dark grey-black to “almost clear silica”, but are mainly dark brown, or brown-purple, bright orange and honey coloured, to shades of grey.
and dark olive green (Seaby, 1951: 125). To the north at Doniford Cliff, now on the Bristol Channel coast, the pattern is repeated (Fig. 7.8).

It is a similar story in east Devon. An examination of 50,000 pieces collected from the parishes of Stockland and Membury, comprising the largest fieldwalking collection from Devon, revealed three main concentrations at Telegraph Cottage (ninth millennium BC), Crandons Cross (c.8000 BC), and Aller Farm (c.7500 BC): all were chert-dominated assemblages (Berridge, 1985: 4). However, there were some important distinctions. Chert was much preferred for core tools, such as picks, axes and adzes: flint, due to its superior knapping qualities, and for applying retouch, was particularly favoured for microliths, and scrapers (Berridge, 1985: 5).

Material from two fields at Nether Exe near Tiverton shows similar broad patterning. Mesolithic artefacts are predominantly of chert and Neolithic of flint, and the chert was probably recovered from gravel deposits (Silvester et al., 1987: 8). The flint is generally black to grey in colour, with the cortex thin and red/brown, reflecting the colour of the soil in which it lies, and is not water rolled. The evidence from all the early Mesolithic sites above demonstrates a clear pattern (Table 7.1).

Table 7.1: Percentages of Greensand chert in early Mesolithic assemblages in east Devon and south and west Somerset. (After Silvester et al., 1987:18)
Another major collection of material is the 26,000 pieces collected around East Week in the parish of Thurleigh, on the northern fringes of Dartmoor. The material was spread over two miles up to the 900 feet contour, and included Mesolithic and later artefacts. Three centres of Mesolithic activity were identified focused on small springs. Raw materials were a mixture of “outcrop, beach and gravel flint, with the addition of greensand chert” (Rankine, 1956: 46). All of the material was non-local and introduced.

7.9 Raw material use in the south-west: the later Mesolithic

Poor quality flint seems to be indicative of the late Mesolithic. At Nether Exe there was a “shift from the Earlier to the Later Mesolithic from the predominant use of chert to that of flint” (Silvester et al., 1987: 16). The microliths from East Week on Dartmoor have since been examined by Jacobi (1979) and he suggested that they show close affinities to the assemblage from Baggy Point in north Devon, the largest collection of late Mesolithic microliths in the south-west peninsula (Jacobi, 1979: 72) (Fig. 7.9). These similarities perhaps suggest a pattern of seasonal movement between coast and upland. The site at Baggy Point was first discovered in 1863, and is located in a sheltered position on a “flat ledge at the mouth of a valley” currently 25 feet above sea level (Gardner, 1957: 163). The material used was beach pebble flint and some chert probably from the Blackdowns (Gardner, 1957: 163). Again along the coast to the west at Elmscott over 1000 pieces of beach pebble flint were found eroding out of the sides of a shallow drainage gully which falls 400 ft into the Atlantic below. Late Mesolithic microliths such as scalene triangles, obliquely blunted points and crescents were found plus a series of sandstone implements, such as ‘rubbers’ and ‘limpet scoops’ (Fig. 7.9). These types of implements have been found at Mesolithic sites in south-east England, namely from Oakhanger in eastern Hampshire, and were classed as being of a south-western origin, suggesting exchange contacts (Jacobi, 1979: 54; Rankine, 1956: 47). A search of local stream beds produced pebbles identical “in shape, size and composition” (Gardner, 1957: 167).
The flints used at these sites along the coast of north-west Devon and north Cornwall indicate a close relation with those from north Somerset, Bridgwater and Minehead areas (Gardner, 1957: 160). The use of pebble flint would seem to be a chronological marker: early Mesolithic sites were dominated by the use of Greensand chert, whereas pebble flint "occurs on all known sites with 'Later' type artefacts situated within ten miles of the west Somerset coast" (Norman, 1982: 17). The conclusion drawn by Jacobi was that these later Mesolithic coastal and inland settlements were not separate cultures, but simply represent the same cultural groups exploiting inland and coastal resources at different times of the year, perhaps spending the summer months on the uplands, such as Dartmoor, or elsewhere on Exmoor and Bodmin Moor, and the winter along the coastal fringe (Jacobi, 1979: 76).

In the early Mesolithic the Bristol Channel may have been no more than a broad river valley, easily facilitating contact between Somerset, north Devon and south Wales. An example of possible contact is a find of an "irregular flake of a Greensand chert amongst the flint debris" of an "indeterminate blade industry" from Three Cliffs Bay, at Penard Burrows on the Gower peninsula (Wainwright, 1963: 117). The important late Mesolithic site of Nab Head II in Dyfed, west Wales, consists mostly of beach pebble flint and occasional pieces of chert. Backed bladelets of scalene triangle shape predominate (David, 1990: 248). These industries, therefore, "show strong similarities to those of the littoral communities in Somerset, Devon and Cornwall" (Wainwright, 1963: 126). Whether this evidence of potential contact continues into later periods is not clear.

7.10 Raw material use in the south-west: the Neolithic and Bronze Age

Neolithic assemblages in the south-west are "typified by a pronounced use of good quality nodular flint" (Berridge and Simpson, 1992: 10). Major Neolithic sites tend to be situated on hilltops, for example, Hembury, Hazard Hill (Totnes), Haldon, High Peak (Sidmouth), all in Devon, and Carn Brea in Cornwall (Pearce, 1981: 40), but the majority is found either on low-lying ground such as the lower Exe valley, or around springs on gentle hill slopes. These ‘sites’ are usually flint scatters “often including a Mesolithic element perhaps reflecting long site use or a conservative approach to stone working (Pearce, 1981: 40). A good example comes from
Hurstone Farm, Warkleigh, in central west Devon, where the material was spread over a relatively level area of two fields on a gentle north-facing slope above a small stream at 120m OD. A detailed assessment of the material here showed that “all the flint used was from small pebbles which limited the shape and size of struck pieces” (Miles, 1976: 7). Many pieces showed signs of use but had no secondary working, and came in a “wide variety of shapes, some very irregular” (Miles, 1976: 7). Although the proportion of artefacts with secondary retouch increases over time with West Country assemblages, many pieces cannot be classified as recognisable tool types, and there was only one diagnostic piece for each of the early and later Neolithic, and early Bronze Age. Miles suggest that this is a function of the availability of raw materials, and the “economical use of pebble flint becoming more marked as supplies of mined flint diminished, presumably during the early Bronze Age” (Miles, 1976: 7). The collection is typical of many post-Mesolithic assemblages, although interestingly the “proportion of arrowheads is unusually high” (Miles, 1976: 10), a situation found on many sites, for which there are differing explanations.

The Neolithic evidence from Nether Exe fits the established pattern. Flint is almost totally dominant and chert represents only 2.5% of the total. The common factor is “that the flint is predominantly non-local” (Silvester et al., 1987: 19). Neolithic collections also have a higher percentage of nodular flint (probably Beer Head flint) than in the late Mesolithic, and although it is true that virtually all the flint will be ‘non-local’ in the south-west, Mesolithic assemblages are more diverse and “typified by the use of more localised raw materials” (Berridge and Simpson, 1992: 10). On the Quantock Hills of west Somerset above Cothelstone, a Neolithic scatter consisted predominantly of grey and black flint varieties (the black indicative of nodular flint, although this is not clear), and a little Greensand chert (Norman, 1974: 56). Again these are generally rather undiagnostic artefacts reflecting the comments of Miles regarding Warkleigh above. There were some arrowheads, complete and fragmentary, two of which were clearly of early Neolithic forms and another leaf-shaped arrowhead made on a flake of Portland chert (Norman, 1974: 56) (Fig. 7.10). Like Warkleigh and many other late post-glacial assemblages, these sites emphasise “the problems of continuity and re-occupation posed by so many of the collections” (Miles, 1976: 10).
Lithic analysis: aims and objectives

The main aim of the analysis of lithic collections was to attempt to identify the transition from the late Mesolithic to Neolithic on Exmoor, primarily through tracing the change in the use of different raw materials over time. The situation on Exmoor presents a challenge. It is not close to any good sources of lithic material, only the fairly ubiquitous beach pebble flint is reasonably close to hand, and the exploitation of the poor quality nodular flint of Orleigh Court to the south-west of Exmoor remains little understood. What, then, is the nature of the available lithic record on Exmoor? The main area of study is the Exmoor massif, as this is where nearly all the later monuments are located. But since this is an upland area, there have been no large fieldwalking projects, and as much of the ‘cultivated’ land is pasture or semi-improved moorland, it is not surprising that little has been found, except for handfuls of chance finds on tracks, paths and the occasional ploughed field. This is also reflected in the distribution of known sites that are concentrated towards the eastern and western ends of the massif and not in the central area where the monuments are found.

Any analysis is restricted by the limitations of the available evidence. Many museum flint collections were made in periods when waste or debitage was not always considered important, and these potential biases need to be appreciated (Gardiner, 1987: 56). The lack of detailed recording, in terms of site locations, or numbers of artefacts and types, which older collections often lack, mean that we need to “gear our level of questioning to the level of the reliability of the material we are examining” (Gardiner, 1987: 57). With these warnings in mind, analysis of the Exmoor lithic record therefore concentrates on the main collections of Mesolithic and Neolithic periods on the moor, but due consideration is also given to other finds from SMR data around the margins of the moor. Bearing in mind the possible types of settlement and seasonal movement in the past, we need to take note of these wider patterns.
Lithic analysis: methodology

The methods adopted for the analysis of lithic artefacts from Exmoor therefore attempt to incorporate the concerns and questions about the nature of the transition to agriculture in the area by analysing the broad nature of raw material exploitation through the Mesolithic-Neolithic transition. Other methods and forms of measurement were also included to try to assess the quality of the basic raw material being used, as well as the more obvious measurements of size and quantity. The design of the recording sheets was based on those from the School of Archaeological Studies teaching collections and adapted to suit the needs of the research on Exmoor, with advice on technology, artefact identification, materials, and analysis from Dr. Rob Young (pers. comm. 1999). A flow chart (Andrefsky, 1998: 74) (Fig. 7.11) was used for morphological identification of artefacts into different categories, again adapted to the requirements of the research. These categories are:

**Tools:**
Edge-modified flakes, complete (all tools, diagnostic types or not), with separate recording sheets for:
- Scrapers
- Projectile points
- Microliths
- Edge modified flakes, fragments

**Debitage:**
Waste, unmodified flakes, complete
Waste, flake fragments
Waste, non-flake fragments
Cores

The recording sheets of all categories of artefact had the same basic requirements. For example: length, breadth, thickness, percentage of dorsal cortex present (100%, <50%, >50%, and 0%, recorded as values of 3,2,1,0), raw material type, colour/patination, comments (note on possible date, retouch type, burnt/cracked and accession numbers where provided etc.). Other categories varied between the requirements of the analysis of the types of artefact (Figs. 7.12; 7.13; 7.14). For
example, the angle of retouch on scrapers (sometimes though not always an indicator of age/or of raw material use), the morphology of the retouched area (convex, straight, hollow etc). I used a numerical recording method (1 = unifacial, 2 = bifacial), plus recording of areas of modification (right side R, left L, distal end D, proximal end P, and C, whether the retouch was continuous around the edge of the piece). It is then possible to differentiate between say, an end, side or convex scraper by noting the areas of retouch if not noted in the comments section. Other values recorded for all tools and waste pieces where applicable included a note of the flake termination type; that is, feathered (a correctly struck piece), step fracture (broken), hinge fracture (indicative of poor striking platform preparation) and overshot termination. The overshot types may have been deliberately manufactured for scrapers (see Andrefsky, 1998: 19). The breadth:length ratio was also noted as a guide to possible chronological patterning (for example Pitts, 1978, and Pitts and Jacobi, 1979).

### 7.12 Hawkcombe Head

Hawkcombe Head is one of the major Mesolithic sites in Somerset, and is situated on the eastern side of Exmoor at an altitude of 410m OD (approx. 1,350 ft). The area from which the artefacts have been recovered lies around the spring at the head of a long, wooded, deeply cut combe, which falls steeply down the Exmoor escarpment and thence into Porlock Vale some 4.5 km to the east. Geologically the site is located on the Hangman Grits, a mainly sandy, erosion-prone rock, unsuitable for knapping. The site was discovered in 1942 by Mr. A. L. Wedlake, an active collector from Watchet, and large quantities of flints, predominantly of late Mesolithic date and of pebble flint, have been recovered from a wide area of approximately one and a half hectares around the springhead. These artefacts cannot be considered to be derived from a single site, but it is suggested comprise the “material from at least four small occupation sites” which may have been occupied on a seasonal basis (Norman, 1982: 20). Many collectors (for example A. L. Wedlake and R. E. Aymes) have established private collections of material from Hawkcombe Head (SMR 33928, Somerset County Council). For example, the Wedlake Collection was assessed by W.F. Rankine and said to be a “pure Mesolithic industry” which had been “recovered from a thin deposit below a peaty humus” (Rankine, 1956: 44). The collection contained
70 microliths, many microburins and “several hundred micro-cores” (Rankine, 1956: 44), which although not stated by Rankine are almost certainly of pebble flint. Since the discovery of the site, numerous other individuals have collected and donated their finds to the public collection, held in Taunton Museum. There has been little professional recording of the site, and no detailed publication.

The collection held by Taunton Museum consists of probably at least 8-10,000 pieces of flint, and some chert, the majority being small fragments of pebble flint. The collection has been sorted into basic categories by previous researchers (R. Jacobi, c.1979, and later by C. Norman), but there has been no attempt to record and analyse in detail a representative sample of all the different categories of material. Therefore a deliberate attempt was made to record some of the more diagnostic artefacts, cores, scrapers, microliths and retouched pieces. There are hundreds of cores and several hundred worked pieces, so I sampled approximately one quarter of each of these types, plus all the (smaller number of) microliths and scrapers. As a result the percentage of the tools and retouched pieces compared with the debitage are over represented in my sample, and do not reflect the relative numbers of artefacts in these different categories in the collection overall. The ratio of tools to debitage is approximately 1:20. However the debitage was considered to be very significant in terms of its composition and size of fragments, and of the 550 pieces examined, 363 were categorised as waste or debitage, excluding cores.

The collection overall consists mostly of pebble flint. Of the sample of 550 recorded pieces, 251 were of pebble flint, identified by cortex characteristics, 12 were pieces of nodular flint, and 250 of indeterminate flint types. Almost certainly most of the latter category also consist of pebble flint by comparisons of colour and quality, but without cortex they could not definitely be identified as such. There were 37 pieces of Greensand chert. In percentage terms, these are pebble flint 45.6%, nodular flint 2.2%, indeterminate flint 45.5%, and Greensand chert 6.7%. This is obviously unrepresentative of the pebble flint percentage, so in order to achieve a more realistic picture it is useful to compare the above figures with the sample of cores analysed.
Table 7.2 Cores from Hawkcombe Head: raw material type.

<table>
<thead>
<tr>
<th>Nodular</th>
<th>Pebble</th>
<th>Indeterminate</th>
<th>Greensand chert</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>1</td>
<td>49</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>%</td>
<td>1.7</td>
<td>81.6</td>
<td>11.7</td>
<td>5</td>
</tr>
</tbody>
</table>

These figures are much more representative of the assemblage as a whole. Pebble flint in the south-west is as we have seen indicative of later Mesolithic occupation sites. Only 5% of cores have no cortex, a very low figure, and reflect the use of pebble flint, some only small pebbles with two or three flakes removed, leaving a lot of cortex intact, before being discarded because of their small size. By contrast, the two largest pieces were a core of Greensand chert and the one core of nodular flint.

The most diagnostic of the tool types were the microliths. There were 17 in the collection at Taunton Museum, and others are held privately. Of the 17, there was one microlith of pebble flint, 15 were of indeterminate flint type, and one of Greensand chert. Again, almost certainly all the indeterminate types are of pebble flint, as the colour of pale grey or fawn is indicative of beach pebble material, which emphasises that perhaps greater care was paid in the manufacture of microliths than any other tool type. The chert microlith is of a dark brown chert, which seems to be the most commonly occurring chert colour. Typologically these microliths are scalene triangles and rods, with the latter form tending to be smaller in size (Fig. 7.15). Chronologically these are typical of later Mesolithic industries. In terms of size ten of the microliths form a tight cluster (approx. 14 x 5 x 2.5 mm), with one slightly smaller and five other slightly longer. Earlier Mesolithic examples only 24 km (15 miles) east along the coast at Doniford Cliff are approximately 50-80 mm long and made of Greensand chert. Within the category of incomplete edge-modified flakes are fragments of another 25 microliths of both rod and scalene forms, and also some microburins that had been retouched to form other types of tools, although none is particularly diagnostic. Amongst the flake fragments there were microburins, possibly as many as 36 of 175 pieces (an implausibly high number perhaps), but not
all of these are certain because of damage. However, we would expect some
evidence of microlith manufacture given the numbers of microliths and cores found
on the site.

There are only two examples of leaf-shaped arrowheads, one only a fragment. Both
were pale grey flint. There were only seven scrapers, although other tools may have
been used as such. However, of these seven, two were of nodular flint, and both were
retouched along the left-hand side, and one also at the distal end. The others of
indeterminate flint types were only retouched at the distal end, indicative of end
scrapers of later Mesolithic date. The nodular flint scrapers may therefore suggest
some minor use of the site in the post-Mesolithic period, because of both their
retouch and material type. The ratio of microliths (17) plus fragments (25) to
scrapers (7) is 6:1, and including the 70 other microliths held in the Wedlake
Collection suggests very firmly Mellar’s (1976b) type A site, an upland hunting
camp.

Tools made on complete flakes exhibit a wide variety of shapes and form few
recognisable types, only some probable awls and piercers being in any way
noticeable, as they are on the whole “rather nondescript” pieces (Norman, 1982: 20).
Although mostly of varying shades of grey flint, there are some examples of a brown
and even a yellow colouration, the source of which is not known. There is consistent
evidence of some reuse of earlier material throughout the assemblage, and a small
but persistent percentage of Greensand chert amongst all the artefact categories,
indicative of an early Mesolithic presence.

Amongst the debitage it is possible that some of the indeterminate pieces are from
Orleigh Court, the relict outcrop of chalk flint from north-west Devon, because of the
different colours present. In terms of size these are certainly smaller than the chalk
flint from Beer Head, which despite the small number of pieces has the longest and
some of the widest pieces in this category. The chert tends to match the sizes of
pebble flint. The breadth:length ratios of the different material types are pebble flint
0.78, indeterminate flint 0.69, nodular flint 1.03, and chert 0.76. The greater size of
the nodular flint is most striking, and the indeterminate flint slightly smaller than the
rest. Although different materials are indicative of different periods, the similarity in
size between the Greensand chert and pebble flint, earlier and later Mesolithic respectively, is interesting. The size of the parent rock is also a very important determining factor, as has been demonstrated in the north-east of England (Young and Kay, 1989). However, we need to compare these figures with other assemblages (see below).

7.13 Selworthy Combe

The site is situated at approximately 245-240m OD on the northern slopes of Porlock Vale in west Somerset. The high ground is cut to the north by Selworthy Combe, which falls west and then south through a steep-sided combe above the village of Selworthy. The material of Mesolithic and Neolithic date was apparently recovered from a ‘floor’ in a ploughed field (at approximately OS 923471) which has since been returned to pasture (PSANHS, 1931:xlv, and Somerset SMR 33989). The term ‘floor’ was in common usage at the time, but it seems the material was collected from the surface and not apparently excavated. It now forms part of the A. V. Cornish Collection deposited at Taunton Museum, and the material was recorded there.

The collection consists of 262 pieces, and a variety of different types of raw material were found, with the relative percentages calculated as the following: nodular flint 15.6 %, pebble flint 4.6 %, indeterminate flint types 78.2 %, Greensand chert and Portland chert only 0.8 % each. But a more accurate figure may be achieved by an analysis of the raw material of the cores found on the site. There are 15 cores, and the relative percentages of raw materials are shown in Table 7.3.

Table 7.3 Cores from Selworthy Combe: raw material types.

<table>
<thead>
<tr>
<th>Nodular</th>
<th>Pebble</th>
<th>Indeterminate</th>
<th>Greensand chert</th>
<th>Portland chert</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>10</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>66.2</td>
<td>12.8</td>
<td>19.4</td>
<td>0.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>

156
Clearly a different picture emerges, but this has, however, had to be slightly adjusted to take account of the very small percentage of chert in the assemblage. Even so, it is clear that the assemblage is dominated by nodular flint indicative of a Neolithic or later date for much of the material, but with a small but nevertheless significant percentage of pebble flint, generally representative of the later Mesolithic period. The almost complete lack of Greensand chert is striking, being so dominant on early Mesolithic sites in the south-west, and the mere trace in the assemblage probably only represents ‘background noise’. The size characteristics of the cores represent a very consistent grouping, with only the pebble flint cores slightly shorter and narrower, which reflects the basic size differences of the parent rock.

The larger size of the nodular flint can be assessed by comparison of the pieces with cortex from the late Mesolithic site at Hawkcombe Head with the flint from Selworthy. At Hawkcombe, 44 % had no cortex on the dorsal face of flakes, but at Selworthy the figure is 59 %. Again, 21.5 % of material at Hawkcombe had between half and total dorsal cortex, whereas for Selworthy the figure is only 1.1 %, and is a good indicator of the relative size and quality of material available. In this respect, it is interesting to note the find in a Minehead garden in 1917 five miles to the east (eight km), of a very large flake of Beer Head flint 90 x 93 x 49 mm clearly struck from an even larger nodule. There was only a small amount of cortex present and several large crude flakes had been detached. It is now in Taunton Museum. Beer Head nodules may of course have been largely trimmed of unnecessary cortex before they were transported, so reducing even further the percentage of pieces with cortex found on sites.

Of 262 pieces, 172 (65.6 %) are classified as tools, that is they exhibit different forms of secondary working, an extraordinary high figure. Only 90 pieces (34.4 %) were therefore classified as waste. Such percentages are in direct contrast to the figures we would normally expect, and the original methods of recovery may be a contributory factor here, as some early collections did not bother with debitage (Gardiner, 1987: 53-6). This could certainly account for the high number of tools, but re-use of earlier pieces may also have been important (see below). Most numerous
are the scrapers, of which there are 43 complete examples plus other fragments. Different periods are represented, but most are Neolithic and made on flakes rather than blades. The nodular flint examples are also thicker than other materials, for example 70% of nodular flint scrapers are more than 10 mm thick whereas only 26.6% of indeterminate flint types have the same degree of thickness.

Only two possible microliths were identified, both of indeterminate flint types, but colour and weathering suggest beach pebble flint. One was a fragment of a probable rod type and the other a small scalene microlith, which was made by re-using an earlier patinated piece. Both are of late Mesolithic types. The arrowheads, however, represent a range of dates. There are 17 definite arrowheads, of which eight are complete specimens and nine recognisable pieces or fragments, with two further possible pieces classified under the tool fragments category. Leaf-shaped types predominate, of which there are 13, plus two transverse arrowheads (one hollow based and one chisel type), and two barbed and tanged arrowheads, one of which is probably made of Portland chert. Otherwise all were of flint, generally grey to dark grey in colour. In traditional typological terms the leaf-shaped examples are usually associated with the early Neolithic, though they are still found later, and often contemporary with transverse types, of the mid to later Neolithic. The barbed and tanged examples usually date to the very late Neolithic or early Bronze Age.

An analysis of the tools made on complete flakes shows that the nodular, pebble and indeterminate flint have the same length and breadth characteristics, and although only a minority actually exceed a 2:1 ratio for length:breadth (the minimum requirement for blades), many are close to this figure. Indeed they are longer in relation to breadth than the material from Hawkcombe Head. Within the indeterminate flint were a number of pieces with cortex that were neither pebble flint nor obviously nodular flint derived from Beer Head, which raises the possibility of contacts with other sources.

The tools display good examples of awls and piercers, a saw made on a distinctive flake of grey flint with a white band (there is a leaf arrowhead of the same material), and some well-flaked knives, two of them of nodular flint. There is good evidence of the re-use of earlier patinated pieces and tools, with six, possibly seven, artefacts
showing two phases or types of secondary working, or where the later retouch has removed the patination, in all about 10% of the category. A good example of the re-use of material is a heavily patinated awl that is polished on the dorsal face. There are several pieces of the same material present in the assemblage and they are probably fragments of a polished stone axe. A similar pattern is found in the tool fragments, with different types of secondary working present, from abrupt Mesolithic retouch to ripple flaking indicative of pressure flaking techniques of the early Bronze Age, though the majority, again, is Neolithic.

Of the waste flakes only 29.6 % are true blades, with several more close to this ratio, but many more are broad flakes. Although generally speaking the latter may be attributed to the later Neolithic, it is also true that many late Mesolithic flakes have the same characteristics, particularly when the ability to make blades is handicapped by the poor quality and size of beach pebble flint. It is perhaps safe to say that, again, different periods are represented, but that the majority is Neolithic, with both earlier and later periods present.

But what type of activity was carried out at the site? Although we need to take account of the vicissitudes of ploughsoil assemblages and the vagaries of collection, it is interesting to note the extraordinary high percentage of tools to debitage, 65.6 % to 34.4 %, which either represents some selective collecting strategies or an intriguing use of material in prehistory. In support of the veracity of the assemblage, we shall see that these proportions are repeated in the Blackford Farm collection, from Porlock Vale (see later section). This would suggest that little in the way of tool manufacture was carried out on the site, as there are only 15 cores and very few small fragments. The limited evidence may therefore indicate a site that was visited by people who had tools already made, and the cores were kept to make repairs or occasional new tools if required. The 59 % of pieces with no cortex also suggest not only the use of good quality flint, but that lithic manufacture was carried out elsewhere. It would also account for the 10 % of tools that showed evidence of re-use, either picked up from the debris of previous visits or adapted to new tasks on the spot. These factors could of course explain behaviour by mobile hunting and gathering groups, herding communities or occasional hunting trips by communities settled elsewhere, but on balance the evidence favours one or both of the first
explanations, and the high percentage of scrapers also indicates preparation of skins, whether wild or domesticated. So we conclude that the site is largely early Neolithic, and probably part of a relatively mobile pattern of movement, perhaps using the same places known from earlier generations, as evidenced by the Mesolithic pebble flint in the collection, but direct continuity is not proven.

7.14 Kentisbury Down

Kentisbury Down is an area of slightly isolated higher ground rising to 337m OD situated to the west of the main block of Exmoor moorland, on the western fringe of the National Park. The following information is almost entirely taken from a report in the *Transactions of the Devonshire Association* 1970. On the north-western side of the Down is a large well preserved mound (at 286m OD), which is believed to be a Bronze Age barrow, and certainly it is of the size of known barrows on the western edge of Exmoor, such as Chapman’s Barrows and Holwell Barrow. The Down was enclosed in the 1860s, and the fields remained under permanent pasture until 1966, when they were ploughed for the first time (Barber, 1970: 245). It was then that the Rev. H. G. Ayre, the Rector of Kentisbury, examined the fields (O.S. 376, and to the north O.S. 430, under his ownership). In this latter field the Rev. Ayre and his sons “collected in this field alone more than 600 flints, as well as a few from an adjoining field to the north-east” (Barber, 1970: 245). In 1968 the fields were re-seeded and returned to pasture. The Rev. Ayre donated his finds to the North Devon Athenaeum at Barnstaple, now known as the Museum of North Devon.

The collection was examined and recorded at the Museum. Although the original report suggested the total number of artefacts as being in excess of 600 pieces, the collection in the Museum contains 451 pieces including ten currently on display. A check of the database showed no record of a larger number, so this may have been an overestimate (Mills, *pers. comm.* 1999).

Of the 441 pieces (plus ten on display, noted for interpretation, but not recorded or examined), the relative percentages of different raw materials are: nodular flint 12.2 %, pebble flint 12.2 %, indeterminate flint types 74.8 %, and Greensand chert 0.8 %. However, we may obtain a more accurate picture of the composition of the
assemblage by assessing the breakdown of the 30 cores into different raw materials (Table 7.4).

Table 7.4 Cores from Kentisbury Down: raw material types.

<table>
<thead>
<tr>
<th></th>
<th>Nodular</th>
<th>Pebble</th>
<th>Indeterminate</th>
<th>Greensand chert</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>2</td>
<td>13</td>
<td>14</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>%</td>
<td>6.7</td>
<td>43.3</td>
<td>46.6</td>
<td>3.3</td>
<td>100 %</td>
</tr>
</tbody>
</table>

This presents a quite different picture to the initial figures of raw material types. The nodular flint is, however, almost certainly under-represented in the new figures, being primarily from Beer Head. It is unlikely to have been transported in completely unaltered nodular form, but was probably trimmed of much cortex, and perhaps even made into usable flakes before transportation. The other source of flint at Orleigh Court may have been used in the same way. The pebble flint is found on the beaches and occasionally from river gravels, and probably would have been transported as whole pebbles, as they are generally quite small. This means that there is a lot of cortex in relation to the size of the pebble. The single core of Greensand chert is the longest but relatively narrow. It is a single platform core in dark brown chert, and almost certainly of early Mesolithic date.

There are two leaf-shaped arrowheads, one just a fragment and the other on display, and also a possible hollow-based arrowhead, in pale grey flint, heavily patinated and retouched all around, which perhaps displays some affinities to late Mesolithic techniques. Also on display are a barbed and tanged example of early Bronze Age date and two further projectile points “almost in the form of an isosceles triangle” (Barber, 1970: 246). These are more difficult to date accurately but are probably of the mid to late Neolithic. They therefore suggest a range of dates from the early Neolithic to early Bronze Age, with the hollow-based example being somewhat problematic.
There is, however, some possible chronological patterning in the variety of scrapers in the collection, of which there are 36. Of the seven recognisable pebble flint examples, four are end scrapers and two more combined side and end scrapers. They all have shallower retouch angles than the other types. The indeterminate flint scrapers include some that have been termed “wasted specimens”, which refers to some hollow-sided examples which when held “give the impression of having been used for smoothing arrowshafts rather than for cleaning skins” (Barber, 1970:246). Overall, they indicate a range of dates.

The rest of the artefacts again reveal evidence of different periods, with a variety of retouch forms and tool types. There are denticulate pieces of pebble flint indicative of late Mesolithic date and finely retouched pieces as saws, plus the usual variety of awls and borers. There is a good example of fabricator in a grey flint, which could be either Mesolithic or Neolithic, the only one recognised from the sites analysed. A rare find in the collection is a polished edge discoidal flint knife (currently on display), usually dated to the late Neolithic or Beaker period. Only two other similar examples are known from Exmoor, a ground edged knife from Lynton and a discoidal form from Wintershead Farm (Chanter, 1906:120; Grinsell, 1970:188). Most of the knives from Kentisbury, however, “seem to be points broken in manufacture and discarded” (Barber, 1970:246).

An analysis of the relative sizes of different material with feathered termination types showed little differentiation. The vast majority is flakes, as few pieces actually correspond to the minimum 2:1 ratio of length to breadth to qualify as blades. Most of the blades are of indeterminate flint, suggesting by their lack of cortex greater care in their manufacture. They are also some of the longest pieces, which tends to reduce the possibility of them being pebble flint. The respective figures for breadth:length ratios are shown in Table 7.5.
Table 7.5 Breadth:length ratio of unmodified waste flakes

<table>
<thead>
<tr>
<th></th>
<th>Nodular</th>
<th>Pebble</th>
<th>Indeterminate</th>
<th>Greensand chert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kentisbury</td>
<td>0.82</td>
<td>0.78</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Hawkcombe Head</td>
<td>1.03</td>
<td>0.78</td>
<td>0.69</td>
<td>0.76</td>
</tr>
</tbody>
</table>

In many respects the results are quite similar, although there are some interesting distinctions to make. Again nodular flint is the largest, or more accurately the widest in relation to length, but these are mean figures, and odd sizes may distort the overall figure. For example, the nodular flint generally has a more extensive size range than the pebble flint, but the latter tends to be slightly wider than the former. This is not shown on the average figures above, but can be demonstrated quite well in a bar chart of breadth:length ratios of different size ranges. Are these figures indicative of chronological patterning or are they a function of the properties of the basic raw materials? As we have seen already, these are not mutually exclusive concerns. The size of the original raw material (beach pebble) may simply restrict the ability to make blades as good as those from nodular flint. The attention paid to pebble flint blades at Kentisbury is clear from the flake termination type data shown in Table 7.6.

Table 7.6 Kentisbury Down: flake termination type percentages

<table>
<thead>
<tr>
<th>Raw material</th>
<th>Feathered</th>
<th>Hinge</th>
<th>Overshot</th>
<th>Step</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodular flint</td>
<td>69.2</td>
<td>11.6</td>
<td>7.6</td>
<td>11.6</td>
<td>100 %</td>
</tr>
<tr>
<td>Pebble flint</td>
<td>76.9</td>
<td>7.7</td>
<td>15.4</td>
<td>-</td>
<td>100 %</td>
</tr>
<tr>
<td>Indeterminate flint</td>
<td>57.3</td>
<td>16.9</td>
<td>1.1</td>
<td>24.7</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Note. Figures are rounded to one decimal point.
The percentage of 76.9% for feathered termination types of pebble flint is particularly impressive given this is the poorest quality raw material. In chronological terms the evidence here could well suggest some late Mesolithic activity, but perhaps more likely some early Neolithic groups using pebble as well as nodular flint. But it is important not to overstate this point, as there is more evidence of later activity, shown by the tools and partially indicated by the flake termination evidence of more hinge and step fractures. Overall, the sizes of both nodular and pebble flint are significantly larger at Kentisbury than either Hawkcombe Head or Selworthy. We may therefore be looking at a mostly mid-later Neolithic assemblage, but with 10-15% of material being of both earlier and later date.

The variety in the assemblage tends to support the original initial evaluation by Dr. Isobel Smith, who stated that although “many of the smaller artefacts give some impression of Mesolithic types” none was earlier than the Neolithic, and that “some are certainly of the Beaker period or even later” (in Barber, 1970: 246). However, the location would seem to have been of some importance over a quite considerable period of time, used by earlier Neolithic groups possibly still practising a mobile way of life and later by more settled communities. It is certainly a more complex assemblage to interpret than Hawkcombe Head, and reflects the ambiguities of possible continuity transcending the simple divisions into chronological periods based on raw material types alone. The field where most of the artefacts were recovered is just to the north of a large mound, considered to be a Bronze Age barrow. The proximity of a mixed assemblage to such a prominent monument is always intriguing and hardly without precedent, and it is possible that the place or locale had already acquired some significance due to the occupation of the land in earlier periods.

7.15 Blackford Farm

The collection is the work of Miss M. Hatch-Barnwell, who as a land girl during the Second World War and for a short time afterwards worked the fields of Blackford Farm, in Porlock Vale, and other farms nearby. The name of each field where the pieces were found was noted and the pieces displayed on large A3 and A2 size card, and these remained in her possession until late in her life when they were donated to
the Rural Life Museum at Allerford, where they were recorded. The major difference between the collection and the other sites considered here is that the artefacts were gathered from a relatively wide area at the eastern end of Porlock Vale, altogether encompassing 14 different fields. The locations of most of these are known, either because the names are still in use or they are recorded on contemporary maps, although there are a few which have not been recognised to date. However, this need not be a problem if we simply consider the material as evidence of land use over an area in the past rather than as a record of activity concentrated at a particular ‘site’. In this respect, this represents one of the strengths of the collection, and provides an excellent means of comparison with the other assemblages.

The material basically constitutes what is generally referred to as the ‘background noise’ of human activity over a significant area of Porlock Vale, and although there were no particular concentrations there is evidence of a small ‘spread’ of artefacts close to Tivington. The pieces from most fields number less than ten pieces, others have between 15 and 50. The numbers are not therefore really sufficient to make observations of individual fields, although to a limited extent this may be attempted with the material from ‘6 Acres’ (48 pieces) and ‘Great Cooklands’ (50 pieces). The small collection will therefore be primarily examined as a whole.

There were 223 pieces in the collection, and the relative numbers of different raw materials are shown in Table 7.7.

Table 7.7 Blackford Farm: raw material types

<table>
<thead>
<tr>
<th>Nodular</th>
<th>Pebble</th>
<th>Indeterminate</th>
<th>Greensand chert</th>
<th>Portland chert</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>31</td>
<td>42</td>
<td>109</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>%</td>
<td>13.9</td>
<td>18.8</td>
<td>48.9</td>
<td>17.9</td>
<td>0.5</td>
</tr>
</tbody>
</table>

There are useful numbers of all material types present, which potentially suggests a range of dates. Unlike other sites though, the evidence from the cores cannot be
interpreted as directly indicative of the overall collection. Variation in colours and types is one of the characteristics of the collection, although the overall colours tend to be fawn, pale grey, and cream, all suggesting weathering and patination, but also tan and dark brown chert, and toffee and red/brown coloured flint, definitely non-local.

Of the 223 pieces, 137 (61.4%) were classified as tools, that is pieces with secondary working on the blade or flake, and 86 (38.4%) as waste. These figures represent a very high percentage of tools to waste, but are in fact comparable to the figure from Selworthy Combe. To put these in perspective, the tools to waste ratio figure from Kentisbury is 30.6% to 69.4%, and from Hawkcombe Head estimated to be 1:20. Of the 137 pieces classified as tools, 21 (15.1%) showed evidence of phasing of retouch indicative of re-use of an earlier struck piece, plus two of the cores. In many cases this had removed the patination, suggesting a significant period may have elapsed, although the rate of patination and weathering is not necessarily consistent. The figure of 15.1% is also likely to be an underestimate, as some pieces may have been reduced considerably, particularly the originally larger flakes of Greensand chert. In some instances earlier patination may have been removed entirely. Although re-use of earlier pieces is a reasonably common occurrence, it is the relative numbers involved here which are significant.

The different types of retouch present suggest different chronological periods and as mentioned above, sometimes on the same piece. It is actually quite feasible that there are examples from the late Upper Palaeolithic to the early Bronze Age. The size of the larger pieces would have made them instantly attractive for re-use in later periods. Most of the secondary working on the tools is the abrupt, neat chipping characteristic of the Mesolithic, and there are far fewer examples of the shallower working (but more intrusive over the flake surface) suggestive of the Neolithic, or the pressure flaking of the early Bronze Age.

Although the core material suggests mostly Mesolithic activity, only two probable scalene microliths were identified, from ‘Knappy’ and ‘Great Cooklands’, but these were not entirely convincing and have rather wide blades, although there is also a possible fragment of a rod type microlith from ‘6 Acres’. There are unfortunately no
complete examples of later projectile points, but there is a possible broken leaf-shaped arrowhead adapted into a borer. Amongst the tools are awls, piercers, a possible burin, several retouched pieces with ‘hollow’ sections, and seven knives of various dates and of different materials, some of the flint pieces being particularly distinctive. For example there are chert knives in tan and dark brown chert, another made on a grey and white piece of banded flint (similar to an arrowhead and saw at Selworthy Combe), also a knife fragment in a brown/red/orange coloured flint. The retouch suggests a late Neolithic date, and the flint is decidedly non-local. An analysis of the size of the tools in terms of the different raw materials clearly demonstrates the larger sizes of the Greensand chert, as of the 22 largest pieces half are of this stone type, although it only comprises 17.8 % of the total number of pieces in this category. Some of these larger pieces also qualify as blades on a length:breadth ratio of 2:1, whereas very few of the other materials do.

Analysis of the unmodified flakes in the debitage suggests a repeat of the above pattern of blades to flakes, only more so. Again Greensand chert is generally larger than other stone types, and all the recognisable pieces of nodular flint are blades, as are all the pebble flint. The breadth:length ratios for the different materials are: nodular flint 0.42, pebble flint 0.48, indeterminate flint 0.65, and Greensand chert 0.62, which clearly illustrates the dominance of blades in the nodular and pebble flint. There is also a considerable number of blades within the indeterminate flint category, but this is masked by the inclusion of a small number of much wider flakes. Genuine nodular and pebble flint blades are a relatively rare occurrence on the Exmoor sites examined, and although the numbers are quite small we can perhaps conclude that the nodular flint blades represent sporadic early Neolithic activity, by individuals or small groups. The pebble flint can be interpreted as either late Mesolithic or early Neolithic.

Although there is a good spread of different raw materials in the collection, themselves good indicators of chronological patterning in the south-west, the balance of both the tools and the debitage favours a largely Mesolithic presence, though certainly some early Neolithic blades as we have seen. The re-use or phasing evident in a number of the tools is suggestive of a period in which good quality material was in short supply, which again favours a late Mesolithic to early Neolithic date when
nodular flint started to replace the use of pebble flint. It also indicates the repeated use of the same sites where material from earlier periods was still available and usable on the ground. Again this is indicative of a predominantly mobile society. The occasional retouched piece from the later periods perhaps indicates that this was a practice which took a long time to die out. Certainly the absence of good quality raw material was probably true of most periods in prehistory in the locality, and may have prompted the re-use of earlier known places.

7.18 Discussion

The sites analysed represent a variety of different periods and types of activity. All assemblages display a mixing of artefacts of different periods to a greater or lesser extent, and illustrate the complexities of interpretation and the question of continuity or otherwise between the Mesolithic and Neolithic on Exmoor. One of the problems of the collections analysed is that they come from the eastern and western edge of the main block of high Exmoor, and there are no large collections from the centre of the current moorland with which they can be compared. Despite these limitations, any analysis such as the above should provide more information to improve our interpretations, but in another way, they can also be quite perplexing. The evidence from the Exmoor sites is both potentially instructive but also seemingly contradictory.

The evidence from the sites has provided relatively consistent information on the use of different raw materials, and has generally supported the overall pattern of use of chert, pebble and nodular flint as approximate chronological markers in the southwest. The other major factors to emerge are the mixing of material of different ages on the same site, and the way in which significant numbers of pieces have been re-used from earlier periods. These factors are not unusual, but the extent to which this occurs on the sites is important. In turn this supports the interpretation of repeated visits to the same locations over relatively long periods of time. Obviously this sort of evidence lends itself to questions of continuity, but the pattern is by no means uniform, as the evidence from Hawkcombe Head demonstrates.
The one clear later Mesolithic site at Hawkcombe Head has only tiny and really insignificant percentages of material from earlier and later periods. It is as if at the end of the Mesolithic period the site or area was never visited again, apart from perhaps a rare visit in the late Neolithic or early Bronze Age. Elsewhere the evidence is patchy. But what was the pattern of movement? Jacobi has suggested seasonal migration in the late Mesolithic with the summer months on the high ground and winter around the coast, for example the possible link between Baggy Point and north Dartmoor evidenced by microlith forms (Jacobi, 1979: 76). In this way, perhaps, the reliance on beach pebble flint could be offset by better quality raw material available through exchange networks, the intensification of which may have been prompted by an “overall reduction in group mobility” after 6500BC (Darvill, 1987: 45). Does the relative lack of material other than pebble flint at Hawkcombe Head therefore reflect a reduced and limited pattern of movement?

The question of continuity is difficult. Some minor Exmoor sites, such as the small Tivington/Wootton Courtney collection from the eastern end of Porlock Vale, do show possible continuity between the late Mesolithic and early Neolithic. It includes late Mesolithic microliths, plus one complete leaf-shaped arrowhead and two fragments, and two tiny cores, one only 14 x 14 x 12mm. It is of nodular flint and its small size and economic use of material is indicative of a mobile society, but using nodular flint and probably early Neolithic. At Baggy Point, a sandstone implement and some “crude pieces of ‘sun-baked’ plain pottery containing quartz” were also found (Gardner, 1957: 163). Although they cannot be shown to be contemporary, it at least again suggests later use of the same place. At Mortehoe, another late Mesolithic site, “a later admixture in the flint assemblage” has also been suggested (Gardner, 1957: 162). By comparison with these sites, the almost complete lack of nodular flint and later material from Hawkcombe Head seems odd. Was it superseded by other sites, did the people move away, or become assimilated into other ways of life?

The evidence from Selworthy Combe suggests a mostly early Neolithic presence, particularly the leaf-shaped arrowheads, with good quality tools from later periods but considerably less in quantity. The site may also have been used over quite a considerable period, with later tools being retouched from earlier discarded ones.
The high percentage of tools to waste may reflect collecting biases, but the "high proportion of reused pieces on Earlier Neolithic sites helps to explain why they contain such low numbers of flints" (Bradley, 1987: 184). So perhaps there is a hint of continuity here. The continuity hinted at from Selworthy, Blackford, Wootton Courtney and possibly Baggy Point, is countered by the seemingly abrupt end to activity at Hawkcombe Head.

The later evidence is not straightforward either. Kentisbury is perhaps the most paradoxical site. Dating by raw material types, generally considered quite reliable in the south-west, does not seem so clear cut here. Although the material is largely Neolithic, pebble flint is still widely used (including similarity to Mesolithic forms), and we do not find as much nodular flint from Beer Head as might be expected. Some of this may have come from Orleigh Court. Flint from Orleigh has been found at a site near Torrington to the south-west of Exmoor and ascribed a Neolithic or early Bronze Age date, so we know it was exploited at this time (Doe, 1933: 164). But if the nodular flint is from Beer Head, we should expect some patterning in the size of the material reflecting the distance from the source, as demonstrated by Care's study of the use of Beer Head flint in the south-west peninsula (Care, 1982: 278). Kentisbury is approximately 82-83 km in a direct line from Beer Head, not significantly greater than the distance of 65-67 km to Selworthy Combe and Porlock Vale from Beer Head. Generally, in fact, the nodular flint pieces from Kentisbury are significantly larger than the other sites, even the pebble flint. Therefore, independently and by comparison, the evidence supports the general appraisal of largely mid to late Neolithic occupation at Kentisbury, but with significant use of local material.

7.19 Conclusion

The evidence, such that it is then, tends to indicate a quite complex pattern of transition from the Mesolithic to Neolithic, with some intriguing and significant variations in the evidence over the Exmoor area. It does suggest the possibility that during the change from a hunting and gathering way of life to a more settled existence, different social groups could have co-existed. Or given the size of prehistoric populations and the extent of uplands in this part of the south-west, some
groups could even have remained largely independent. The environmental evidence indicates that many upland soils on Exmoor did not become acid enough to preserve pollen until the first millennium BC, so higher Exmoor would have been a less forbidding environment than today (Maltby, 1995: 34; Straker and Crabtree, 1995: 45). Work in north-eastern England has suggested the possible survival of hunter-gatherers in the uplands away from the spread of agriculture in the Wear Valley (Young, 1989). The ethnographic evidence also stresses that we should recognise the adaptability and resilience of hunter-gatherers in the face of a supposedly superior culture and technology (Brody, 1983). Any adoption of new traits may only have occurred within accepted limits, and perhaps the problem of mixed lithic scatters and possible adoption of Neolithic projectile point technology by surviving hunter-gatherers is relevant here (Young, 1989: 174). Adaptability does not equal acceptance. By concentrating on identifying change in prehistory, we may well tend to underestimate the innate conservatism of prehistoric societies and “the sheer persistence of particular traditions” (Edmonds, 1995: 18). The cultural beliefs and practices of late Mesolithic hunter-gatherers may have had an element of persistence which needs to be recognised by us, as it may have been by people in the early Neolithic period. The repeated finds of Mesolithic and Neolithic flint scatters beneath early Neolithic long barrows “seems unlikely to be coincidental and demands an archaeological explanation” (Saville, 1990: 261). The evidence of repeated use of the same place and of poor quality flint for long periods may not only have functional explanations. To assess why this may have been the case, I suggest that we need to look at other aspects of the relationship between land and people. It is perhaps only by assessing the explanations against a range of archaeological data, that we can identify the broad patterns of change. The next chapter will examine the standing stone monuments of Exmoor from this perspective.
Fig. 7.1 Early Mesolithic tool types from Shapwick, Somerset (actual size). (Adapted from Wainwright, 1960).
Fig. 7.2 Late Mesolithic tool types (including perforated pebble tool and bone harpoon. (Adapted from Edmonds, 1995).
Fig. 7.3 Early Neolithic tool types (arrowheads, scrapers, serrated blades, knives, and cores. (Adapted from Edmonds, 1995).
Fig. 7.4 Late Neolithic fabricators, borer and flake axe (top row), and barbed and tanged arrowheads (bottom section). (Adapted from Edmonds, 1995). Late Neolithic arrowhead forms, half scale (middle section). (Adapted from Silvester et al. 1987).
Fig. 7.5 Sources of raw material in the south-west. (Adapted from Jacobi, 1979; and Care, 1982).
Fig. 7.6 Sites mentioned in the text. (Adapted from Jacobi, 1979).
Fig. 7.7 Early Mesolithic tools from Greenway Farm. (Adapted from Norman, 1975).
Fig. 7.8 Early Mesolithic tools from Doniford Cliff. (Adapted from Norman, 1975).
Fig. 7.9 Late Mesolithic microliths and tools. From Baggy Point. (After Jacobi, 1979). From Elmscott. (Adapted from Gardner, 1957).
Fig. 7.10 Neolithic tools and projectile points from the Quantock Hills, Somerset. (Adapted from Norman, 1974).
Fig. 7.11 Flow chart for identification of stone tool categories. (After Andrefsky, 1998).
Fig. 7.12 Copy of data recording sheet: edge modified flakes – complete (reduced).
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Fig. 7.13 Copy of data recording sheet – microliths (reduced).
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Fig. 7.14 Copy of data recording sheet – Cores (reduced).
Fig. 7.15 Late Mesolithic microliths from Hawkcombe Head. (Adapted from Norman, 1982).
8.1 Introduction
Megalithic monuments are some of the most spectacular remains of prehistoric societies. The relationship of monuments to the transition to agriculture is no longer seen as a secondary phenomenon, but is central to that process. This chapter attempts to outline how that process may have occurred on Exmoor in south-west England. The monuments on Exmoor are, however, far from spectacular, but many of them, the small stone settings, are quite unique to the moor. There is also a lack of the usual early Neolithic-type monuments on Exmoor, which raises questions about the date and kind of process that may have occurred.

The study will start by providing a brief scenario of the European background, and move on to assessing the way in which natural landscape features have consistently been recognised as integrally part of monument designs and construction. These latter aspects are seen as being very important to the central argument of this study, as they may relate to the importance of hunter-gatherer beliefs in the transition. The aims of the fieldwork and methodological approaches are then outlined, before analysing the evidence from the fieldwork in more detail. The fieldwork attempted to identify the nature of different monument locations and whether different worldviews could be detected in the concerns of these places. It is argued that ‘hunter-gatherer type’ locations are evident, and the chapter finishes with a discussion of the wider implications of the evidence.

8.1 Monuments and the transition to agriculture
Monuments are found all around the Atlantic fringe of north-west Europe. The question why has attracted the attention of archaeologists for decades. In Chapter Two I outlined some of the history of these explanations. The most obvious question is: why should they be there at all? The fact that monuments were built marks a
significant departure from previous practice, and their very permanence may be the most significant factor, as monuments “dominate the landscape of later generations so completely that they impose themselves on their consciousness” (Bradley, 1985: 9). So who built them? The spread of farming into the outer areas of north-west Europe did not necessarily involve the movement of people (although obviously domesticated animals and plants were eventually adopted), but spread by an ideology, the transmission of ideas, and some aspects of the material culture that encoded those ideas (Thomas, 1988, 1991a). However, that does not mean that the way the new forms of material culture were accepted into hunter-gatherer society would necessarily be uniform; they may have varied (Bender, 1992).

In western France, arguments are concerned with the local or eastern origins of the earliest monuments and whether early radiocarbon dates c.4700 BC, at the Bougon passage grave for example, are reliable, in which case they pre-date those in the Paris Basin (Thorpe, 1999: 61). Therefore they may have been built by hunter-gatherer communities. Some workers though, have sought influence from Neolithic cultures. Sherratt (1990) sees the development of long mounds for burials in western France as the result of influences from the Linearbandkeramic Neolithic culture, and as symbolic representations in monumental form of LBK longhouses. These may have been constructed either by colonists from the loess or by indigenous communities in contact with them (Sherratt, 1990: 156). The construction of the tomb by an agricultural workforce was also symbolic of the cohesiveness of the community (Sherratt, 1990: 150). However, this interpretation still incorporates monuments as a subsidiary product of agriculture. As this question has involved interpretations of the archaeological evidence of both Mesolithic and Neolithic cultures, researchers have increasingly realised that the simplistic models of passive hunter-gatherers accepting a higher form of culture are continually contradicted by the evidence, as in the transition in the United States (Bradley, 1993: 12). It has also shown our distinctions between the two ways of life to be far too simplistic.

The assumption that farmers build monuments and hunter-gatherers do not is also misleading. As we have seen in Chapter Two, the classic LBK farming communities did not build monuments, which seem to be distributed outside the areas colonised by the LBK. In fact they are found in the areas we know were continually occupied
by hunter-gatherers, specifically in southern Scandinavia, by late Mesolithic communities that match the model of complex societies with delayed return systems. Here and in western France these societies had contacts with agricultural groups via extensive exchange networks, and were familiar with Neolithic material culture for a considerable period before we actually find evidence of the adoption of domesticates or economic intensification associated with an agricultural economy (Thorpe, 1999: 93). There are also well attested ethnographic examples of hunter-gatherers building monuments; although they are limited in scale and required relatively little effort, their construction involved considerable planning and organisation such as storing food in advance (Bradley, 1993: 10-11).

Certainly in western France the distribution of passage graves is more in keeping with “areas where relatively dense Mesolithic settlement can be inferred, especially on the coasts” (Sherratt, 1990: 156). Sherratt suggests the design of a round chamber in a round mound is suggestive of native house design (although there is little evidence) and the incorporation of these in trapezoidal mounds “shows an accommodation to the exterior appearance of the long-mound model” derived from the LBK longhouse (Sherratt, 1990: 156). Hodder (1990) also argues that the long mound invoked the concept of the domus implicit in the LBK longhouse. The domus represented the domesticated sphere contrasting with the wild, agrios. The boundary between these, the foris, is represented in monumental form as the entrances to long mounds, binding together symbolically the domus and agrios, the domestic and the wild. This was, however the ideological structure which Hodder identifies behind the spread of agriculture in south-eastern and central Europe. Its extension and adoption by coastal hunter-gatherers in north-west Europe may not be so straightforward (Armit and Finlayson, 1992: 672).

Bradley (1998a) has criticised these ideas as too abstract and failing to establish a link from the world of people’s everyday experience to their forms of practical action, where understanding about how to ‘go on’ in the world derives from a “cultural setting that is permeated with symbolic meanings” (Bradley, 1998a: 42). Bradley suggests that long mounds may have represented symbolically the forms of decayed LBK longhouses, which were perhaps left to decay after the death of one of the inhabitants, with the long mound becoming the house of the dead (Bradley,
The process of decay and eventual collapse of the house may have given rise to the significance of the symbolic form of the long mound. The tendency of long mounds being found in groups also tends to replicate the plans of LBK settlements themselves (Bradley, 1998a: 43-7). This implies an indirect link from LBK to the late Mesolithic of western France. However, Thomas (1996) sees the impetus for monumentality not with eastern influences, but rather as "an extension of the process by which indigenous populations appropriated and transformed Neolithic material culture" (Thomas, 1996: 129). He also says that the differences in the treatment of the dead between long and round mounds, where one is a single act of deposition and the other gives access for considerable period afterwards, are indicative of a different role for the ancestors within society. These differences may be more significant than the shape of the mounds themselves (Thomas, 1996: 130). We need to consider this last point further.

It is recognised that in farming societies the ancestors tend to play a much more significant role, where farmers have a different sense of time to hunter-gatherers which is related to the scheduling of the agricultural year, and reproduction of the social unit rather than reproduction of the land (Meillasoux, 1972: 101). The association of megalithic monuments and burials as being constructed by farmers is now recognised as too simplistic. The earliest tombs are burials, but they are closed with no possibility of access after construction, implying that the ancestors play no continuing role within society. The archaeological record contemporary with these early tombs shows little evidence of adoption of domesticates. In western France the process of tomb construction starts about 4500 BC and in southern Scandinavia at 4000 BC. The rate of development in each case is also different (Bradley, 1998a: 63). In Brittany the earliest forms of burial are cists associated with Mesolithic cemeteries, and similar forms are found under long mounds. But access to the burial is not possible. Passage graves seem to be later, and the development of the passage allows access to the burial remains after construction of the monument. Evidence for farming does not come from the period of the early tombs, but later. The access to the remains of the dead via the external passage implies a much more meaningful role for the ancestors within society as a whole, evidenced by the removal of bones from long barrows and their use in other places and rituals, probably ancestor cults, more associated with farming societies (Bradley, 1998a: 63-67). Monuments mark an
important break with what went before, but their relationship to agriculture is a reciprocal one, not one of cause or effect (Bradley, 1998a: 66).

At the heart of the problem lie the differing attitudes to land and people’s relationship to it, and how this may have changed through time. Sherratt has argued that monuments form a set of cultural messages communicating to onlooking and ‘unconverted’ hunter-gatherers (Sherratt, 1995). Certainly for hunter-gatherers “territorial behaviour is basically a mode of communication” (Ingold, 1986: 133), and megalithic monuments are dramatic statements that can change the way a place is understood, by their very construction and permanence. We therefore need to recognise the importance of monuments in themselves, not as an add-on to agricultural communities or simple statements of territoriality, but as dramatic statements of people “engaging in a project of religious significance, the result of which was intended to last for ever and was referenced to something beyond their immediate experience” (Richards, 1996a: 193).

Recent studies have attempted to show how this practice of literally ‘altering the earth’ (Bradley, 1993), may have changed people’s sense of both time and place, and what monuments helped to achieve “was a perception of the world that made agriculture easier to imagine and easier to execute” (Bradley, 1993: 68). We can now recognise that, although many megalithic monuments were built some time after the arrival of agriculture, monumental earth and timber structures are found from the start of the sequence in northern and western Europe. Monuments were therefore “a fundamental aspect of the spread of farming practices into outer Europe”, and were implicit in the process of the transition (Sherratt, 1995: 253).

So both in western France and southern Scandinavia, and probably Britain, the distinction between ‘natives’ and ‘newcomers’ is broken down by the process itself. But in both areas the influx of either people or ideology “provoked a reaction: partly an imitation, partly something different, but monumental and megalithic” (Sherratt, 1990: 164). Monuments are therefore specifically part of the native or indigenous reaction to the spread of agriculture and are an integral part of their becoming Neolithic. It is the way in which hunter-gatherers interacted with agriculturalists and/or with a new material culture and ideology, that is of fundamental importance to
defining the nature of the transition in north-west Europe. This places much more importance on understanding the world view of Mesolithic hunter-gatherers. Much recent work has incorporated models of hunter-gatherer ideas of landscape and territory into their explanations of monument locations, and it is to these we now turn.

8.3 Natural features and monuments
Changing attitudes to land and how these are enacted through time inevitably involve questions of continuity and attachment to places. If places and monuments are only understood as sites, this necessarily limits the number and type of explanations that are possible, with excavation providing the answers. Implicit in the more traditional approaches is an understanding of space as two-dimensional, an abstract geometry of surfaces and co-ordinates, where distribution maps are the result. Space is here simply seen as the container for action, a universal Western concept of space, which provides a sound basis for methodologies of mapping and quantifying, but which finds it difficult to accommodate the concepts of landscape found in small-scale non-Western societies (Tilley, 1994: 8-9). More recent approaches have therefore attempted to place monuments in the context of the wider landscape, where they can be understood as part of a process. Here geometric space becomes places, which are socially and historically constructed and therefore open to change and meaning. The subjective world of human experience is the focus for these types of approaches, perhaps typified by Tilley (1994), although there are associated methodological problems, as we shall see.

The Mesolithic-Neolithic transition is the context for the construction of the first monuments, and therefore to interpret monuments in their landscape context, some appreciation of the way the landscape is understood in small-scale societies has been the starting point for many recent studies (Bradley, 1991, 1993, 1998a; Tilley, 1994, 1996; Richards 1996a, 1996b). For hunter-gatherers, places and paths seem to be the focus for understanding and embedding their understanding of land. Paths are very often equated with the process of life itself, and the sense of time is related to a seasonal round of movement, and as places and people are important in the movement, paths are symbolic of the links between people, society and places.
Places act as a focus for ritual behaviour and belief. Indeed there may be an appropriate path or direction of approach to sacred places (Tilley, 1994: 28). These beliefs and ritual actions tend towards the veneration of purely natural features such as caves, outcrops, springs, and even whole mountains. From this it can perhaps be seen why monuments are generally rare in hunter-gatherer societies (Bradley, 1991: 136). Although there would not seem to be any room in this cosmology for monuments, we know that hunter-gatherers can under some circumstances construct small stone settings, cairns, rock art, or mark trees (Bradley, 1991: 135; 1993).

There are several different types of relationship between natural features and monuments. In south-west Wales Tilley suggested that dominant rock outcrops were significant in the Mesolithic period and acted as focal points, so that later monuments were built next to them. Tilley terms the outcrops ‘non-domesticated megaliths’, and it is the proximity of the monuments to the outcrops which makes the megalithic tombs visible (Tilley, 1994: 99). The use of such locations may suggest a wish for the monument to be seen as subordinate to the natural outcrop itself, suggesting that the natural world is still dominant. Similarly, proximity to water as symbolic of an entrance to the underworld could have determined the location of the chambered tomb at Gwal y Filiast which is located on a steep slope above a section of rapids on the River Taf (Tilley, 1994: 109).

By comparison, the chambered long cairns of the Black Mountains in south-east Wales are much larger constructions. Mesolithic material was found under one monument at Gwernvale and Tilley argues that there is “repeated utilization of these specific locales” (Tilley, 1994: 118). The main thrust of his argument is that these long mounds demonstrate a will to make themselves visible, and “the orientation of the long axis of the mounds was of the utmost significance”, which is contrasted with the less visible tombs in west Wales (Tilley, 1994: 142). The differing forms of visibility here are interesting, although Fleming (1999) has seriously questioned some of the fieldwork observations. For example there may be sampling problems in west Wales due to the likely survival of monuments on and around rock outcrops (Fleming, 1999: 120), and in the Black Mountains other possible associations between monuments and natural feature have been ignored, which “inhibits a more objective consideration of the contexts of these sites” (Fleming, 1999: 122-3).
However, Tilley's argument that the monuments were built at places on paths of movement by a still largely mobile society is of relevance, if still somewhat abstract, and not properly accounting for local factors.

Other types of relationship can be demonstrated, in particular the incorporation of natural features into the monument itself. A good example is Caerloggas in Cornwall, where a natural granite tor is surrounded by an earthwork. Evidence of earlier activity included Mesolithic, Neolithic and Bronze Age flintwork (Bradley, 1991: 137). The area around the tor was the focus for a series of deposits such as a bronze dagger, stone beads, tin slag and amber (Bradley, 1991: 137). At Whittor on Dartmoor there is another possible Neolithic enclosure built around the natural tor, with cairns incorporated into the enclosure wall (Quinnell, 1994: 53). There is a variety of features on Dartmoor. Tors or even small boulders have been encircled by stone rings. Most are on summits, for example Branscombe's Loaf, which "dominates the approach to the moor from the north-west" (Turner, 1990: 37) (Fig. 8.1). Sometimes the tor is not encircled completely, as a segment of a circle can abut the natural outcrop as at Chinkwell, although most are less regular (Turner, 1990: 37), and interestingly these features are similar to the segmental ring around the spectacular rock formation of La Pinnacle on Jersey. This was originally a stone axe quarry, and after a stone platform was built up against the rockface a series of deposits was made. These included a copper axe, some fine pottery, and flint artefacts including a large number of projectile points (Bradley, 1993: 26-7). Although La Pinnacle is much larger and very spectacular, and remains the focus of the place, similar beliefs seem to have been at work.

The separation of ritual space by a wall across a promontory as at La Pinnacle is repeated elsewhere. In the Cleveland Hills of north-east England, bank and ditch boundaries have been constructed across upland spurs or promontories, usually at their narrowest point. These areas on ridges or spurs are not necessarily distinctive, but are "defined variously by streams, slopes or present-day marshy areas" (Vyner, 1994: 29). The bank was probably constructed in a clearing, and the promontories may also have been cleared, highlighting the cleared areas in an otherwise relatively wooded countryside. The combination of the natural topography and a bank is interpreted as being the demarcation of "a territory of ritual" (Vyner, 1994: 36).
Vyner suggests that these demarcated areas represent a “more extensive manipulation of the landscape” than the use of rock outcrops as the focus for monuments (Vyner, 1994: 37).

Not all sites are made to be easily visible and some are almost deliberately hidden from view. The Hegwm Circle at Llanaber is set back from the edge of terrace making it quite invisible until close by (Lynch, 1975: 126). There are also more subtle uses of natural features in monuments. The excavation of a ring cairn at Penmaenmawr revealed the largest inner kerbstone to be a natural boulder in-situ. The importance of the stone is emphasised by the location of a hearth and burial underneath its overhanging end dated to 1520 +/- 145 BC (NPL 11) (Lynch, 1972: 73). The centre of the circle was empty, but directly opposite the natural boulder on the far side of the ring was a pit, which contained a small Collared Urn containing burnt earth and charcoal. Charcoal beneath the ring gave a date of 1405 +/- 155 BC (NPL 10), and it is suggested that “the monument was designed around the stone” (Lynch, 1972: 73). The ring would therefore seem to incorporate a sacred geography in miniature deliberately combining the natural and cultural elements.

Single standing stones or menhirs have often been interpreted as boundary markers. Although some may have been adopted for this purpose in later periods the locations of many of these monuments in Wales suggested another alternative. Many are sited on valley sides, even on very steep slopes, floodplains and at the upper end of river systems (Roese, 1980: 646). The orientation of the menhirs was interpreted as being directed towards water-related features (Roese, 1980: 648). Stone rows, however, do not seem to be related to water features, and were found in a variety of locations, especially saddles or passes, generally on sloping ground (Roese, 1980: 653), and maybe marking routes across the uplands (Bradley, 1991: 137). A similar pattern is reported by Emmett (1979), on Dartmoor, where stone rows are sited “away from water, on the interfluves” (Emmett, 1979: 105). These were likely to have been built in clearings, with the rows extended and elaborated over a period of time, probably during the early Bronze Age (Emmett, 1979: 105).

Many of these sites are in upland areas, and although this seems to some extent an accident of survival, the various use of natural landscape features, distinctive
topography (what Bradley terms ‘places as monuments’), were part of an older tradition. They seem to have been used and/or constructed very often before the adoption of settled forms of agriculture, and may relate to use of these areas by people “practising a mobile economy long after the first adoption of domesticates in lowland areas” (Bradley, 1991: 138).

We have so far looked at various examples of combinations of monuments and natural features, but the real significance of these monuments lies not in any single meaning, but that they “were a means of making material a whole system of meanings” (Thomas, 1991a: 39). By drawing elements of the natural world into the design of the monument, they could create, or perhaps symbolise, a new cosmology. The location of the Stones of Stenness and the Ring of Brodgar in Orkney within a natural bowl is mirrored in the “architecture of internal ditch and external bank” (Richards, 1996b: 324). The ditches may have been filled with water originally, mimicking the way the site was surrounded by lochs, and the upright stones symbolise the rock formations of the hills forming the edge of the natural bowl. In this sense “both monuments constitute a microcosm of landscape, a representation of the natural world” (Richards, 1996b: 324) (Fig. 8.2). The cosmology imposes a new order.

Similarly Richard Bradley has suggested that these types of monuments (henges and stone circles) represent a circular perception of space, as seen from the inside of the circle or monument, which was deliberately built in a place that could “encapsulate the qualities of the surrounding area and might summarise in massive form any existing qualities of that location” (Bradley, 1998a: 122). Not only do they mirror the local landscape but are symbolic representations of the whole landscape (Bradley, 1998a: 122). There are, however, significant differences between henges and stone circles. The former are enclosed by often massive banks, blanking out any extensive view to the outside world for those in the centre, the only view possibly through the entrance(s). In contrast, Bradley sees stone circles as ‘permeable’ monuments which “permit a continuous relationship between the sacred space of the interior and the landscape beyond” Bradley, 1998a: 130). These differences may be reflecting the changing nature of the relationship of prehistoric communities to their surroundings.
The different ways in which elements of the natural landscape have been incorporated directly into monuments or symbolised within the overall design of the sites demonstrate the importance of this connection for prehistoric communities. So by tracing the changing relationship between natural places and monuments in the archaeological record it may be possible to chart the nature of the transition from a hunter-gatherer world view to domestication. I shall now apply some of these ideas in an investigation of the prehistoric standing stone monuments on Exmoor in south-west England.

8.4 The monuments of Exmoor and their study

The background and general history of archaeological research on Exmoor were very briefly charted in Chapter Six, but I now want to concentrate specifically on the evidence of prehistoric monuments on Exmoor. One potential problem for a study attempting to identify the transition from hunting and gathering to an agricultural way of life would seem to be the almost complete lack of Neolithic monuments of any kind on higher Exmoor. There are no known long barrows, cairns or causewayed enclosures, apart from the remains of a possible portal dolmen on the narrow coastal strip between the Brendon Hills and the Bristol Channel coast (Gray, 1931). One possible henge, cut in half by a field boundary and ploughed, is probably a disc barrow (Grinsell, 1970: 55). There are two known stone circles, at Withypool, found in 1898, and on Porlock Common, found in the 1920's, both surveyed by Harold St. George Gray (Gray, 1906 and 1928). They are perhaps of late Neolithic, though probably early Bronze Age, date. There is a handful of large stone rows, mostly found in the last 25 years, and numerous small stone settings and single standing stones. None has been dated scientifically, although they are generally assumed to be prehistoric, and probably of the second millennium BC in date.

The small stone settings, arranged in geometric patterns of triangles, squares, kites and rectangles, “are almost without parallel in Britain and Ireland, but with larger counterparts in Brittany” (Burl, 1993: 88). These inconspicuous and largely hidden monuments have been known since Camden reported in 1607 the existence of “certaine monuments of anticke work, to wit, stones pitched in order, some triangle wise, others in a round circle”. But like much of Exmoor’s archaeology, they have
not received the amount of attention that has been directed elsewhere. Much more visible, though, are nearly 400 large round barrows, often sited on crests and summits. In fact the stone settings were “at first regarded as interesting adjuncts to barrows” and only later were they considered worthy of recording in their own right (Chanter and Worth, 1905: 375).

Two papers on the recording and surveying of the rows and settings on the Devonshire side of Exmoor were published by the Reverend J. F. Chanter and R. Hansford Worth in 1905 and 1906. With previous experience of Dartmoor monuments, they recorded 34 sites in various states of repair. This valuable work provides information of locations of sites destroyed just prior to their survey, provides plans of sites since destroyed by twentieth century agricultural ‘improvement’, and those sites partially damaged and denuded since then, so some records of the earlier plans are known. On the Devon side of Exmoor a local fieldworker recorded the standing stones in the area around Ilfracombe, some of them large spectacular stones, of white quartz conglomerate rocks (Palmer, 1937).

Leslie Grinsell’s *The Archaeology of Exmoor* (1970) drew all the then available evidence together, and it remains an extremely valuable guide, but he had little to say about the stone settings other than they were “unspectacular and difficult to find”, recommending them for further research (Grinsell, 1970: 47). One setting at Westermill above Exford was partially excavated in 1982 after ploughing had damaged the area, but the results were inconclusive (Burrow, 1983: 14). Other efforts and surveys have been undertaken by interested amateur archaeologists, for example Eardley-Wilmot’s *Ancient Exmoor* (1983), who discovered a stone row known as ‘White Ladder’ in 1975, and whose long experience of Exmoor provides some pertinent observations. A more systematic study, cataloguing all the known standing stone sites in the Greater Exmoor area, was undertaken by Dr. M. J. F. Fowler during the 1980s and subsequently published (Fowler, 1988; 1993). This covers the areas beyond the National Park boundaries and also provides an up-to-date version of Palmer’s (1937) work. Surveys for management purposes in the 1980s contributed greatly to the appreciation of the wealth of the archaeological resource on Exmoor, for example highlighting the association of small mounds with many of the stone settings (McDonnell, 1985a).
The basis for the analysis that follows, however, is the survey undertaken for the Exmoor National Park Archaeology Advisory Group by the Royal Commission on the Historical Monuments of England (RCHME), between 1988 and 1992 (Quinnell and Dunn, 1992:1). The survey covered all the known lithic monuments; that is, stone circles, rows, settings, single stones and Dark Age inscribed stones. Several more sites were discovered during fieldwork. The survey drew together, assimilated, and checked all the other references in the Devon and Somerset County Sites and Monuments records (SMR), at the same time providing much needed information for management and conservation policies in respect of the sites. The survey was, however, only concerned with those sites within the Exmoor National Park. These accurate plans and descriptions is a superb record and provided the foundation for my fieldwork observations.

8.5 Fieldwork: aims of the survey

The central aim of the fieldwork was an attempt to trace the nature of the transition to agriculture on Exmoor. This very broad aim could only be achieved indirectly by focussing on an analysis of the lithic monuments described above and their topographic locations. The assumptions underpinning this approach were based on a synthesis of a hunter-gatherer worldview derived from the many different ethnographic accounts and research drawn together in Chapter Three. From this general picture, and the relationships of prehistoric monuments to natural landscape features interpreted by other researchers above, the fieldwork aimed to identify any possible relationships between the monuments and the surrounding environment. A further aim was to analyse the possible relationships to other monument types and any prehistoric settlement remains, to attempt to establish some relative dating evidence. The final aim was to assess whether types of relationships between particular monument types and locations occurred, and whether these patterns could be interpreted within a framework of the changing relationship between prehistoric groups and the natural environment now considered a central part of the transition to an agricultural way of life.
There were also two further subordinate, but associated problems, which the survey attempted to investigate. These were much more difficult to study, but in fact are, I would argue, central to understanding prehistoric cosmologies, and prehistoric concepts of sacredness and landscape. These two further aims are first, what makes a place sacred, and second, why are some places chosen for monuments when there seem to be other similar suitable locations only a short distance away? It can be seen that these questions are related to the broader aims of the fieldwork above. The reasoning behind these secondary questions is also derived from the ethnographic evidence, where indigenous peoples consistently argue that sacred places are not chosen, as sacredness is not accorded, but resides within a place. As discussed in Chapter Five, beliefs of the reality of the sacred have never been taken seriously by many researchers, so without pre-judging those beliefs, this study will at least attempt an assessment of this difficult subject.

8.6 Fieldwork methods
As archaeologists we are used to recognising the elements of the culturally constructed landscape, but the problem with assessing the role of natural features is precisely that there is perhaps no direct archaeological ‘trace’. If the axis of say, Neolithic long mounds is consistently directed towards particular types of natural landforms, then it is possible to argue for a connection. Alternatively if local groups of monuments have alignments with natural features that reveal a concern that is consistently related to lunar or solar cycles then this is significant, even if the details may remain obscure (Ruggles, 1999: 107). If this type of evidence is not manifest, then the danger in attempting to identify the possible significance of purely natural features and their relationship to monuments is that the observer ends up seeing and recording what they want to see. These criticisms have been made of Tilley’s (1994) fieldwork in south Wales by Fleming (1999; see above). The reason for the criticism lies to a large degree in Tilley’s philosophical approach and the methods deriving from them. The phenomenology advocated by Tilley and followed by others is that of the role of the ‘actor’ in the landscape, where the physical form of the land will enable or constrain movement as it did in prehistory, and so the researcher can experience the meaning of the landscape by moving through it. Tilley contrasts this approach with that of the more traditional, detached ‘objective’ observer.
However Tilley’s phenomenological approach finds difficulty in practice, largely because phenomenology as a philosophy does not give rise to a method (Billinge, 1977), and his fieldwork is largely of descriptions (Brück, 1998: 25). The problem for Brück is that Tilley assumes the “universality of the human body and the materiality of the landscape” (Brück, 1998: 26), but perception and experience of space is argued to be subjective and relational (Tilley, 1994: 8). These assumptions would seem to be contradictory to a post-processual approach (Jones, 1998: 10). The reason these may be seen as contradictory is that Tilley is attempting to combine both sides of the nature:culture framework when it is the framework which needs to be changed, as discussed in Chapter Three. Although there are obvious biological universals, these should not be set up as contradictory to what is culturally and historically specific. Such criticisms have the benefit of hindsight, but Tilley’s work at least has initiated an interesting debate. I would agree that we need to try to take account of the beliefs and experiences of past human populations, but we cannot directly understand or replicate them. Hence the need for comparative studies of accounts of many experiences, from which general conclusions can be drawn, being aware of the limitations of our own approaches.

The fieldwork intended to survey approximately 100 sites of various lithic monuments on Exmoor. In the end 85 were visited. This was not a highly detailed survey of individual sites but was designed to identify broad patterns in the topographical locations of the different types of site. A more focussed survey of a smaller area, concentrated on a number of sites, would be the next logical step. So the method I adopted enabled the a priori assumptions about the possible relationship of monuments to natural features to be structured in a series of largely objective observations. This approach determined a form of topographic survey that would not only record possible relationships to natural features, but also incorporated a recording and scoring system that allowed for negative testing.

However, it was also considered important to build some flexibility into the survey methods and recording that would allow any minor points to be noted during the survey, even though their possible significance would be unknown at the time. Later these minor observations could be assessed, discarded or seen as significant if other
similar factors occurred. The elements and experience of the landscape are therefore allowed to enter into the data as your knowledge and experience of it grow, rather than imposing a rigid recording methodology that makes no allowance for imponderables.

The survey was conducted by following a series of set questions. These observations were hand-written in the field on four-sided recording sheets divided into eight sections (Figs. 8.3; 8.4; 8.5; 8.6). These field sheet(s) included a copy of the relevant site plan made by the RCHME survey, and which allowed a check on the current condition of the site. Any changes, damage, or perceived threats could be noted and passed on to the Exmoor National Park Archaeologist. Most sections of the survey (1, 2, 4, 5, and 6) were questions of a purely descriptive nature concerning visibility, relationship to other sites, and archaeological or natural features. These were predicated on the respective assumptions concerning: (a) the importance of the visibility of location and site; (b) the need for relative dating by reference to other archaeological features and their landscape context, and (c) the identification of places demonstrating the types of concerns or relationships to natural landscape features constantly found in the ethnographic evidence of hunter-gatherers and other small-scale societies. After the survey these observations were then valued according to the proximity of, for example, cairns to a stone setting: (e.g. on site, 5 points; 0-10m 4 points; 10-50m 3 points), and likewise with proximity to natural features such as rock outcrops and springs. Visibility was also be assessed and scored on the basis of several factors.

To aid this assessment, sites were also placed in one of ten different categories of landscape location (Table 8.1).

Table 8.1. Monument survey: categories of landscape location and number of sites

<table>
<thead>
<tr>
<th>Location type</th>
<th>Number of sites in category</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) On summit</td>
<td>1</td>
</tr>
<tr>
<td>(b) Below summit, above saddle</td>
<td>8</td>
</tr>
<tr>
<td>(c) On ridge or false crest below summit</td>
<td>7</td>
</tr>
</tbody>
</table>
(d) On saddle 6
(e) Below crest, above shoulder of hill 36
(f) On shoulder, or break of slope 6
(g) On steady (dip) slope 6
(h) Below shoulder on terrace 8
(i) Steep slope below shoulder of hill 4
(j) Valley bottom or terrace 3

Total number of sites: 85

The clear preference of sites for particular types of locations is evident. The scores and location categories then provided a starting point for assessing the particular concerns exhibited by the sites, and whether certain types of site were found in the same types of location. However, there were limitations in this methodology that became evident as assessment of results progressed (see below). A more interpretative and reflexive approach was required to take the study further.

In this respect I was aided by other aspects of the survey observations that had attempted an initial more subjective interpretation of the site locations: for example Section 3 on the ‘Wider landscape context’, Section 7 on the ‘Material elements’, that is, the stones themselves and any evidence of phasing of the sites, and Section 8 ‘Dowsing approaches’. This last section was deliberately included to counter the dominance of purely visual observations of the rest of the survey. It involved a dowsing survey for evidence of underground water at or around site locations, or any other unusual or perhaps significant responses.

Prior to fieldwork, checks were made of SMR listings of other archaeological sites on Exmoor, such as hut circles, field systems, or round barrows. These were then marked or noted on the OS 1:25 000 map of Exmoor if not already present. This was then used during fieldwork to check for wider relationships and distances, or to identify other landscape features and places. A hand-held compass was used to take bearings, including possible astronomical alignments. Although observation and recording of possible astronomical sightlines were included in the survey (Section 6), the vast majority of sites were in poor condition, and incomplete, so often the original plan was not clear; the bearings taken under these conditions were therefore
extremely arbitrary, and consequently I have not felt it was possible to draw conclusions from these observations without more considered work. Seven grades were set for assessing the condition of sites: (1) good, (2) restored, (3) slight damage, but clearly recognisable pattern, (4) damaged, or ruined but recognisable, (5) Ruined, no pattern, (6) destroyed, (7) uncertain. Obviously these are only basic categories for assessments and there may be some that are borderline, for example between (5) and (7). Most sites came into categories (3), (4) or (5).

8.7 Site typology and distribution

There have been different attempts to build a typology of the various types of lithic monument on Exmoor. For example Emmett (1979: 109) includes amongst his definition of stone rows, sites with three rows of three stones, and Burl (1993) includes sites with two rows of three stones, and other sites he calls Exmoor ‘boxes’ (Burl, 1993: 79 and 90). These are perhaps more simply called ‘settings’, as followed by Fowler (1993: 172). The Royal Commission survey also followed a similar typology, although they recognise it is an “inevitably subjective exercise and some sites lend themselves to more than one classification because their original form and extent are now often uncertain” (Quinnell and Dunn, 1992: 3). The typology I adopted was based on the RCHME classification plus some minor amendments, finalised as follows: (1) single standing stone, (2) pair, (3) setting (must be three or more stones), (4) stone row (single or double; note sites with two rows of three stones are not included but classified as settings), (5) stone circle, (6) other standing stone monuments, (7) uncertain.

The survey is almost entirely concerned with the sites within the Exmoor National Park, but the wider pattern of distribution was not ignored, and some sites outside the Park boundary were also included. Other sites, for example those around Ilfracombe in north Devon (Palmer, 1937), are nearly all single standing stones, some of dubious validity (Fowler, 1993). These are noted for the purposes of a discussion of the distribution, but none was surveyed. The current distribution of all the above types of site is obviously the result of thousands of years of change, and it is difficult to assess the extent of possible removal of standing stones, single or settings on and around Exmoor. Chanter and Worth give several examples of sites removed not long before
their surveys, including the destruction of a nine-stone setting at Furzehill on Exmoor by a farmer called Antell, who used the stones for drainage gutters (1905: 392).

Much of the marginal upland areas around the moor was enclosed during the nineteenth century, including the extensive area of the old Royal Forest, roughly equating with the existing parish of Exmoor. Many south-facing slopes were ‘improved’ with drainage schemes and ploughing to break the iron plan (Orwin et al., 1997) [1929]. There is no record of any sites lost, but it is highly unlikely that none was destroyed. The relatively small size of Exmoor stone settings, rows and single standing stones means they are vulnerable to sheep-rubbing. Even recently sites have suffered damage, partly perhaps due to ‘shepherding’ by Land Rover (Eardley-Wilmot, 1983: 35). Others seem to have been deliberately vandalised in the last twenty years or so, for example Chapman Barrows, or the nine stone setting of ‘Porlock Allotment I’ (Quinnell and Dunn, 1992: 60) (Fig. 8.5). This last site is quite remote. The distribution pattern that remains is therefore not particularly instructive, except for the central part of the moor, where settings are concentrated at the upper ends of the river systems draining north into the Bristol Channel (Fig. 8.7), prompting Burl to suggest they were constructed by people moving upstream from the coast (Burl, 1993: 90). The density of sites in this central area is unrivalled anywhere in Britain, despite the loss elsewhere around Exmoor (Best, n.d.).

8.8 Exmoor monuments: large sites
The oldest known monument in the greater Exmoor area is the site of Battlegore, Williton (approximately 28 m OD), on the narrow coastal plain to east of the moor. The site consists of the remains of three round barrows and some large stones probably from a small dolmen. The site was not surveyed for this study, but there was an excavation carried out by H. St. George Gray and published in 1931. The largest stone was 3m long and 1.3 m wide and had probably rested on the others according to Gray’s reconstruction (Fig. 8.8). The finds included a small flint core, a burnt flint fragment, three flint flakes and an arrowhead termed hollow-based (Gray, 1931: 20), although Grinsell terms it as a petit-tranchet derivative (Grinsell, 1970: 26). The largest of the three round barrows was also excavated by Gray, although it had been much disturbed by previous digging and cutting of drainage ditches. In the
disturbed material he found fragments of Peterborough ware and a ground and polished knife made on a long narrow flake (Gray, 1931: 35). These artefacts may date the site to the late Neolithic or very early Bronze Age.

The site is low lying and next to a stream which is liable to flooding, and “it is rather surprising that it should have been made use of by prehistoric people” (Gray, 1931: 11). However this would seem to be a deliberate choice, as the site is overlooked by significantly higher ground only 100m to the north. Two ring ditches are also known from aerial photographs (Somerset SMR 35378). Finds of bronze implements close by may raise the possibility of ritual deposition in watery or boggy contexts adjacent to the burial site. The proximity of the stream is therefore highly significant. The site is also something of an anomaly. The nearest Neolithic tomb or chambered long barrow is actually 32 km (20 miles) due north across the Bristol Channel at Maes-y-Felin, Glamorganshire (Grinsell, 1970: 26). Others in Somerset are at least 50 km to the north-east and belong to the Cotswold-Severn group (Minnitt, 1982: 26), although some are known from mid-Devon, for example Uplowman, Tiverton (Smith, 1990).

On the western side of greater Exmoor, the site of Mattock’s Down has also been almost entirely destroyed. All that remains of a once impressive monument is a huge (3m x 1.2m x 1.3m) standing stone of conglomerate rock, mostly of white quartz or ‘spar’. Chanter and Worth (1905) have traced the various antiquaries’ reports of the site, which chart its progressive destruction from the early seventeenth century. From these reports they reconstructed the original plan (Fig. 8.9).

Burl suggests there may have been a row between the two large uprights that had been robbed before 1630. This would have made it a ‘high and low’ double row similar to sites in Brittany and Northern Ireland (Burl, 1993: 90). Burl compares the length:breadth ratios of Dartmoor double rows of 91:1, with Mattocks Down which is barely 2:1, and other Exmoor ‘rows’ of approximately 3:1, clearly suggesting that Mattocks Down is part of the Exmoor group (Burl, 1993: 90). The site sits on a slight rise (at 215m OD) towards the southern end of a pasture field, situated in the saddle between two low, but distinct hills, Mattocks Down to the south rising immediately behind the site. These block distant views to north and south-west particularly,
although Holdstone Down (349 m OD) is visible to the north-east. Otherwise the
topography tends to direct sightlines to west north-west to east south-east, the
original axis of the monument. The location of the site on the major watershed
between north-and south-draining river systems would also appear to be significant.

In the centre of higher Exmoor, along the same east-west line of the watershed as
Mattock’s Down, is another relatively large site, at least by Exmoor standards. It is
known as The Chains Valley setting (445 m OD) and was first surveyed by Chanter
and Worth (1906: 544) (Fig. 8.10), who recorded thirteen standing stones and one
fallen, and interpreted the site as the remains of three rows aligned north-east to
south-west. Now only eight earthfast stones remain plus three fallen or displaced,
and it is now regarded as an irregular setting. (Quinnell and Dunn, 1992: 40-41).
There is quite possibly more than one phase, as the stones of the northern end are
significantly smaller, and despite the loss of some intervening stones look like a
separate entity. Located on a narrow area of land between the sources of two river
systems, with higher ground to north and south, it incorporates a model of sacred
geography as well as being ideally located for monitoring movement. It is not the
only site to display these characteristics.

On Almsworthy Common is another large stone setting, also located on the same
major watershed and at 434 m OD, overlooking a narrow section of land between
north-and south-flowing streams. First discovered in 1931 after swaling (periodic
burning of vegetation, for example, heather), the site was surveyed by H. St. George
Gray, who interpreted the plan as two concentric ovals enclosing a small circle, with
one outlier, in all comprising fourteen stones (39.3 m x 28.7 m) (Gray, 1931: 80-1).
The identification of oval or circular plans is now considered incorrect, and another
stone has since been identified, so now there are fourteen earthfast and one loose, the
largest being 0.7 m high (Quinnell and Dunn, 1992: 37) (Fig. 8.11). They have been
identified as the remains of a row, or several rows, although as Burl observes
“considerable faith is required to see either a ring or a row”, and apart from a
possible blocking stone at the east-south-east end, the stones “twist in a confusion of
directions unlike most other rows” (Burl, 1993: 121). However typologically
confusing, the site is intended to be seen. Almsworthy setting is located by the
narrow saddle of land connecting the high extensive bulk of Dunkery Hill at the
eastern end of higher Exmoor with the central part of the moor. Topographically it is very similar to the Chains Valley setting: it is almost as if it guards the entrance to the land beyond. A possible outlier set at the head of the combe to the east south-east, may be later, or a necessary compromise to ensure visibility of the larger site, and if so, it ties the setting symbolically to the source of the stream.

Only three kilometres to the north is Porlock stone circle, which was surveyed by Gray in 1928, when ten of twenty-one stones were upright, all that remained of possibly an original 40 to 45 stones (Burl, 1995: 76). By 1992 fourteen stones remained, half standing, half fallen (Quinnell and Dunn, 1992: 63) (Fig. 8.12). Of these the largest was 0.8m high and the largest recumbent stone was 2m long. The circle is 24.4 m in diameter. Intact, this would have been higher Exmoor’s most impressive monument, constructed of local green micaceous sandstone (Gray, 1928: 75), but its original context is lost. A nineteenth century hedgebank and the single track Porlock to Exford road, run north to south only 20m from the eastern edge of the circle. On the other side of the road, the fragmentary remains of a double stone row have also been found. The stones, however, are small and barely break the turf, and are aligned south-east to north-west, closer to the remains of a cairn (with orthostat) ten metres north-east of the circle, than the circle itself. A small trench was dug into the cairn by Mrs Gray but with no results (Gray, 1928: 75). There are other cairns 10m and 100m to the north-west and 25m to the north.

The site is on a gentle south-west sloping terrace on the northern side of the shallow combe of Colley water, at the head of the eastern limit of the Lyn river system, the ground rising slightly to the watershed with the Porlock system 500m to the east of the site. At 410m OD the site is only slightly lower than the land to north and east, but there is slightly higher ground forming the horizon in all directions, with more distant views to the south-west. It is not exactly sited in the middle of a natural amphitheatre: it is closer to the edge, but still subtly different from the large stone settings.

Withypool stone circle seems to combine elements of the location of settings and circle. It is located in the south-eastern part of higher Exmoor, some 10.5 km south of Porlock stone circle. At 36.4 m diameter, it is larger than the Porlock circle, but
consists of much smaller stones. The largest stone is only 0.5m high, but most average only 0.1 m x 0.3m x 0.1 m (literally only 4 inches high) (Quinnell and Dunn, 1992: 68). Originally there may have been 100 stones 1m apart. In 1906 Gray recorded 37, and by 1989 there were only 27 plus three fallen stones (Quinnell and Dunn, 1992: 68) (Fig. 8.13). The site is on a slight but distinct terrace on the south-west slope of Withypool Hill at 383m OD. The main approach to the circle would clearly seem to be along the broad spur from the south-west, defined by streams to north and south. Beyond is higher ground to west and south. The position and altitude of the circle may also have been chosen as the only place making it possible to view both up and down the Barle valley, which is aligned north-west to south-east. The combination of topographical axes broadly at right angles to the site suggest the alignment of the valley is significant here, and perhaps allows it to form a 'natural' focus within the landscape.

These large sites, from Mattock’s Down to Withypool, have some distinctive similarities, but perhaps more significant differences, which may reflect different cultural outlooks or world views. Firstly, Mattock’s Down, Chains Valley and Almsworthy are all on the same watershed, and all make an effort to be seen, as do the stone circles. But the three large ‘watershed’ sites are all sited quite noticeably at topographic points in the landscape that seem to channel movement: they are on ‘natural’ routes or pathways. Mattocks Down is only 100m south of the B3433, and there are important cross moor tracks and passes adjacent to the Almsworthy and Chains Valley settings. Using present-day tracks to support the location choices of prehistoric sites is certainly subjective, but as Bradley has noted of large sites, “it is striking how many of them are near to modern roads - or, rather to the topographical features that account for their position in the landscape” (Bradley, 1998a: 121).

Eardley-Wilmot (1983) has argued for the existence of three main ridgeways running east and west across Exmoor in prehistory: The northern coastal ridgeway; a central one following the main divide; and a southern route forming the abrupt southern boundary of the moor and swinging north-west to join the central ridgeway at the western end of the moor. Here, where the saddle of the southern ridge joins the central one, it is crossed by the east-west B3358, and is known as Roosthitchen. This derives from the Welsh roos meaning moor or heath, and Old English twicen, a
crossroads or fork in the path (Ekwall, 1989: 392 and 483), suggesting that the ridgeways were routeways. Although it is certainly too simplistic to see ridgeways as prehistoric highways as Eardley-Wilmot suggests, certain places along them, passes and linkages of high ground, would seem to have had some importance in the historical past. The proximity of prehistoric sites to current routes also suggests a greater ancestry, for example the watershed locations above. Porlock stone circle is close to a smaller watershed, and only 20m from the north-south Porlock Hill to Exford road. There is no other similar north-south ridge route across the moor for another 8.5 km to the west. This seems unlikely to be a coincidence. The sites may therefore be marking places that were already important for existing patterns of movement.

8.9 Stone rows

The locations of the three largest and longest stone rows on the moor also show an interesting relationship to these ridgeways. Culbone row lies only 100m away from the northern ridge, Madacombe stone row only 200m from the line of the central watershed, and White Ladder on the high south-western edge of Exmoor is again only 100m away from the long ridgeway here. All three sites have been discovered since 1975. All three are curiously sited not along summits or exactly in saddles, but on shallow gradients away from water on the interfluves, as noted for Dartmoor (Emmett, 1979: 105). All are on, or close to, parish or county boundaries. The single row at Culbone has 21 stones unevenly placed over 371 m, but aligned approximately E to W (388-408m OD) across the northern side of a slight saddle (Quinnell and Dunn, 1992: 62) (Fig. 8.14). It curves by about ten degrees as if originally two rows were started separately, “meeting at the crest and its ends not intervisible” as the eastern end falls downhill (Burl, 1993: 97). It also dips slightly in the middle, and has barrows beyond both ends, the western end the higher, although there are no clear associations. Another single standing stone, inscribed with a wheeled cross of Dark Age date, lies 50m south-west of the western end of the row, and may originally have been part of it.

Madacombe is a single row consisting of twelve stones extending over 286m, with uneven spacing between the stones (Quinnell and Dunn, 1992: 52) (Fig. 8.15). It is
aligned east south-east to west north-west at 425m OD, some 200m north of the main divide, but aligned obliquely across the southern side of a saddle with high ground extending to the north-west. To the north is the boggy source of the Madacombe brook, the most southerly extension of the East Lyn system. There are barrows located at both ends of the row but only the eastern one is actually in line. The row rises gradually 500m to the east south-east to high ground around the large Alderman’s Barrow (447m OD), where three parish boundaries meet.

White Ladder, found in 1975 by Hazel Eardley-Wilmot, is a double row at least 420m long, aligned south-east to north-west, although cultivation has destroyed a large section towards the north-west end (Quinnell and Dunn, 1992: 29). Of 161 stones found to date 61 are of quartz, which occurs naturally on the ridge, and probably accounts for the name White Ladder on a Inclosure Map of 1819 (Eardley-Wilmot, 1983: 24). They are small stones and often engulfed in peat in wet weather. Again it is sited on the northern side of the ridge, obliquely to the saddle, rising to the south-east (463-474 m OD), where there is the barrow cemetery of Five Barrows on the summit (actually nine). The alignment of the row is also at right-angles to the saddle of a large broad spur of high moorland extending to the north-east. The row therefore sits at the junction of areas of high ground and three different rivers. The large stone rows would therefore seem to have some pattern to their locations, and focus attention on specific places. The way they deliberately cut across the natural topography but also accentuated particular angles and relationship to it, may have symbolically re-ordered the space and would have changed the way people understood these places.

Unlike Dartmoor rows, where the alignments follow all points of the compass, eleven of the twelve Exmoor rows do seem to have alignments centred either side of the east-west axis, with south-east to north-west being the most common. Most however are small, comprising three or four stones, for example two rows (one termed a setting by RCHME), along the crest of Furzehill Common, perhaps working as a pair on rough summer and winter alignments. One is aligned south-east to north-west, and the other north-east to south-west. Both the medium-sized rows of Thornworthy Little Common (44 m) and Wilmersham Common (56m plus 12m extension) are aligned north of east and south of west. Both have a higher eastern end
with the lower end towards a stream. All of the Exmoor rows except for Culbone are higher towards the eastern end or level.

Wilmersham stone row is ‘sinuous’ rather than straight, and may have been constructed in sections. The first section, 56m long, with many stones at ground level and curiously placed transversely across the line of the row, has a larger stone 0.6 and 0.5 m high at the ends. From the north-east end is an irregular 12 m long extension, with another larger stone 0.4 m high at the north-east end (Quinnell and Dunn, 1992: 55-6) (Fig. 8.16). Bradley has compared this site with alignments of stones at Kunturu, Western Australia, presumably constructed by the indigenous hunter-gatherers (Bradley, 1993: 10). Wilmersham row is certainly different, with stones placed transversely across the line of the row rather than having their axis on the row alignment, which may hint at a different cultural tradition. Bradley has argued elsewhere that if hunter-gatherers do modify natural places the changes are on a small scale. These changes include the construction of cairns and small stone settings (Bradley, 1991: 135). It is precisely these types of monument that Exmoor has in profusion.

8.10 Further methodological considerations

It is also at this point that some limitations of the methodology became evident. For larger sites there is an implicit assumption that they have a more than localised significance, suggesting that the area of the landscape which is deemed to be incorporated into the design and setting of the site extends over a considerable distance. The ‘amphitheatre’ setting of stone circles is an example. But over what scale were other sites, such as the relatively small stone settings, to be considered? How large was the area of their ‘sacred geography’?

The observations and scoring methods used had certainly highlighted stone settings that were either visually prominent or those in proximity to distinctive landforms or natural features such as rock outcrops and springs. These latter characteristics are often associated with hunter-gatherer type places in the ethnographic literature (Chapter Four). However, a potential circularity emerged that, because on Exmoor features such as rock outcrops occur below the shoulders of the hills and along the
valleys (unlike the summit tors of Dartmoor and Bodmin Moor), there was a danger of simply ‘reading off’ supposed hunter-gatherer type locations from the scores of sites with proximity to these features.

Although as a first level interpretation these distinctions were useful, it remained clear that the majority of sites fell outside these parameters, and would seem undervalued by the scoring methods. It was therefore necessary to apply further more subjective criteria to all the sites to assess their location in terms of possible site function. Here the information drawn from fieldwork observations for Section 3, ‘Wider landscape context’ was used. This had been the most difficult section to complete in the field, as it forced me to think about the possible past use of the location rather than just record what was visible. The location of sites was assessed in relation to views, potential to control movement, hunting locations, through routes and passes, upland/lowland divides, stock gathering locations, seasonal meeting places, and ritual sites that lacked any obvious alternative function. By thinking about the possible use of the land in this way it allows the study to move to a second level interpretation, combined with a re-examination of the map evidence, and forms the basis of the interpretations that follow.

8.11 Stone settings
There are 44 stone settings and seven sites of pairs of stones, making 51 sites in all. Because some pairs may have been larger sites originally, these two categories will be considered together. Firstly there were several sites located on terraces below the shoulder of the hill, which seemed to have no apparent relationship to patterns of movement, or with views over surrounding country, although they did have views towards distinctive landscape features, knolls, steep slopes into combes, rock outcrops, and streams, particularly confluences. Examples include the spectacularly sited pair of stones of Long Chains Combe (S), on a small spur in the Upper Chains Valley, Thorn Hill (Ruckham Combe), hidden in a hollow close to the edge of a steep combe, and Cheriton Ridge I that has views to Holcombe Burrows in the valley below. The type site, however, is Horsen (Fig. 8.17), virtually hidden on a terrace down a steep slope above the River Barle, overlooking the spectacular knolls of Cow Castle (a small Iron Age hillfort), and the smaller Calf. Comprising five small
inconspicuous stones and two cairns closer to the edge of the terrace, it is not a site to be seen, but to look out from. Ritual, either hidden, or perhaps connected to activity on the knolls in the combe below, would seem to be the only possible function.

The settings of Lanacombe V and Hoccombe Hill I are also on terraces below the shoulder. The former (now ruined) looks down to a confluence, and the latter across broken ground above the west-east flowing Hoccombe Water to the abrupt north flank of Lanacombe, forcing the observer to look east or west. The plan of the site, a kite with the axes to cardinal points, represents the main axes and features of the topography (Fig. 8.18). The location on a terrace could of course allow any activity to be viewed from above, but it does seem deliberately hidden. Another site, Trout Hill IV (found during fieldwork), looks south-west straight along the stream bed of Lanacombe. Similarly to the east Trout Hill II looks east up Long Combe. These might seem unremarkable except for the fact that direct views into valleys are rare on Exmoor, as most sites are above the shoulder and out of sight of stream beds. Other less hidden sites such as Lanacombe IV and Winaway (Fig. 8.19) have extensive views north across Hoccombe Hill and Ilkerton Ridge respectively, and would be well placed to monitor movement in a relatively open environment. All these sites are small and inconspicuous.

Other sites which have views, however, seem deliberately located to be seen. They also tend to be large sites and/or large stones, unusual for Exmoor, and perhaps on a smaller scale show similarities to Almsworthy Common and the Chains Valley sites. For example the two massive sandstone blocks (0.85 x 0.35 x 0.9m flat topped, and 0.9 x 1.65 x 0.35m pointed top), known as the ‘Whit Stones’ (Fig. 8.20) just below the summit of Porlock Hill, are sited to be seen by anyone coming up the combe from the south-east or along the ridge of Porlock Hill from the east. Although now leaning at 60 degrees they are still very visible, but if located on the broad summit, they would be missed. Two other large stones (0.9m and 0.95m high) on the crest of Yenworthy Common along the coastal ridge (the only site on the moor to have stones on the summit), can also be seen up to 2-300m to the east, and 150m from the west. These sizes and distances might not seem significant, but by Exmoor standards they are certainly unusual. They not only demonstrate a clever use of topography, but also that if large stones were required, they could be found.
Certainly the location of some of these sites appeared to be related to patterns of movement, and in terms of questions of upland:lowland divides, through routes, potential stock gathering locations, and possible seasonal meeting places, many more can be identified. The settings of Wood Barrow Hangings and Wood Barrow are located respectively north and south of the main divide towards the western end of the moor. Wood Barrow may also be related to movement of people and animals across North Regis Common to the south-west, as it is aligned towards the head of Yarbury Combe, and the head of the River Bray.

Along the central divide to the west is a concentration of settings and large round barrows. Significantly there are no settings and only one barrow on the high ground for three and a half km to the east, the next setting being the Chains Valley site, set at the head of the next route or pass. The passes and points of access to high ground would seem to have been important. Smaller stone circles are often “associated with routes along upland valleys or even with mountain passes” (Bradley, 1998a: 121). Again at the eastern end of the moor on the southern slopes of Rowbarrows is the semi-ruined site(s) of Codsend Moor. The site also lies along a potential path of movement from the spur to the south-east. The setting is aligned along this axis, and at the north-west points towards the summit of Rowbarrows. In this respect it is similar to the location characteristics of the larger stone rows. Now it is within the bounds of nineteenth century intakes, as is Westermill setting above Exford, but the line of the current limit of cultivation should not however be ignored, as indirectly they may tell us something that our abstract models cannot.

The connection between movement and a divide between upland and lowland is a complex one, and several sites are found just within or beyond the field boundaries of various dates. Two sites are found close to prehistoric boundaries. The setting on Tom’s Hill is at right angles to any movement up the spine of the hill, and is also immediately uphill of a prehistoric field boundary, that actually seems to dog-leg past the site. There is a prehistoric settlement to the south-west (McDonnell, 1985a), and the boundary may be related to this later site. There are also the remains of a prehistoric boundary running up and down the slope adjacent to Lanacombe II stone setting, and a ruined cairn, and a larger cairn on the crest abutting the boundary.
Cheriton Ridge IV (Fig. 8.21), Clannon Ball, and Pig Hill I are just within or outside post-medieval intakes. Clannon Ball (Fig. 8.22) is set at the head of a dry combe leading onto Brendon Common from the Farley Water valley. Although small, the stones are visible on the skyline as one climbs up the combe. Also visible on a false crest nearby is an “anomalous structure” of an irregular mound with several small upright stones (Quinnell and Dunn, 1992:16). Another unusual but very similar site was also noted on a false crest by a track at Badgworthy Lees, consisting of two small upright stones and a probable natural block (Quinnell and Dunn, 1992: 11). These two sites lack the formality of the settings, but also seem to be marking routes onto higher ground. These places and sites could easily be significant for hunter-gatherers marking boundaries, where advertisement is the form of territorial behaviour, or for pastoralists on transhumance routes.

Other sites considered to be located in relation to possible movement between lowland and upland are Hoaroak (which seems to occupy a similar position on Furzhill Common as Cheriton Ridge IV does on Cheriton Ridge), Hoaroak Hill NE, Beckham Hill, Swap Hill and Kittuck. They are on the boundary of upland valleys and higher ground, and may therefore be located close to areas suitable for stock gathering. Hoaroak Hill NE setting is located on a slope above a terrace of Hoaroak Water. On the terrace below is a probable nineteenth century sheep pen, for stock gathering. The now ruined but originally large site of Kittuck is on the high ground above Three Combes Foot, again with a sheep pen at the confluence. Other examples are Beckham Hill (Fig. 8.23) and Swap Hill (Fig. 8.24), only 200m apart on opposite sides of a small tributary of Badgworthy Water, below the higher ground of Elworthy to the south. In the confluence to the west is another sheepfold set on a knoll. More significantly, on the low ridge of Pinford to the west of the sites are the remains of a prehistoric enclosure (Fig. 8.25). Originally interpreted as a possible hill-slope enclosure (McDonnell, 1985a: 52), its general condition and the lack of any evidence for hut circles in the interior is now thought to “represent earlier enclosed settlement” (Best, n.d.). It is therefore possible that mobile communities used the site for the seasonal gathering of stock, although this does not preclude a ritual function.
The final collection of settings was much more difficult to identify as having particular functions related to the above, and these seem more directly associated with symbolic connections to landscape features, and sacred geography, specifically ritual sites. This does not mean that the other sites were not associated with religious belief and ritual, but rather that I wanted to accentuate other aspects of their locations, which indicated why they might have been constructed in specific places. Brendon Two Gates is one of the Exmoor settings of five stones known as quincunxes. It is a quadrilateral where the central stone is set at the crossing of the diagonals of the square (Fig. 8.26). Set below the broad, unspectacular, ‘summit’ of Brendon Common, overlooking the saddle to Hoar Tor to the south, with the ends of streams flowing east and west from the saddle respectively, in some ways its location characteristics are again similar to those of Almsworthy and The Chains Valley, but not as obvious. It is set at the crossing of the ways, and its ‘architecture’ attempts to reflect the surrounding geography, both natural and cultural.

It is also possible that some site relationships are indicative of the evolution of ritual practices and locations. I have suggested that many small, hidden sites may reflect hunter-gatherer concerns. The small sites of Lanacombe V and Cheriton Ridge I are unobtrusively sited on terraces below the shoulder, but both have the much larger and more prominently sited settings (of Lanacombe I and Cherition Ridge II) within 150-200m on the crests. Are the larger sites later? A possible combination of these characteristics is the site of Furzehill Common V, a large setting, relatively hidden on terrace above Hoaroak Water, but with a small triangular arrangement of stones at the southern end, which may be of a different, and perhaps earlier, date (Fig. 8.27). Only 70m to the south is the head of a small combe or gully. Proximity to these features was also noted at Cheriton Ridge I and IV, Lanacombe V, Winaway, Trout Hill IV, and Squallacombe I.

Other sites seem to show a close proximity to streams, and a concern with symbolic connections to topography. For example, the settings of East Pinford (Fig. 8.28) and Hoccombe Combe are both aligned east-west, close to water and overlooked by higher ground, which again may reflect attempts to symbolise the sites as the ‘centre of the world’. There may also be some astronomical alignments at East Pinford (Somerset SMR 33041). Porlock Allotment, a two-stone setting above a confluence,
with a natural block and cairn nearby, is aligned west down the stream, with the bluff of Outer Alscott blocking views beyond.

Two small sites complete this group. Both are situated right at the upper end of gullies that become shallow combes lower down, and the stones are set in the very dip of the ground. Hoscombe setting comprises two small stones aligned down the north-east to south-west axis of the gently sloping gully on relatively open and recently swaled land. Exe Plain, however, is tucked away in a rush-filled hollow high above the upper Hoaroak valley. Once possibly two or three stones (Chanter and Worth, 1906: 545), only one remains standing. Both sites showed distinct associations to patterns of underground water during the dowsing survey (see below).

8.12 Single standing stones

Relationship to water, or source, appears to be a consistent factor amongst many of the single standing stones, and beliefs about fertility may be the organising factor here. Of seventeen single standing stones surveyed, three were subsequently discounted because of the possibility of being rubbing stones. Two others, the Culbone Stone and Caractacus Stone have Dark Age inscriptions and were also discounted, as, although possibly prehistoric, they may have been moved from their original positions. Of the others, four, or possibly five, show distinct associations to springs and rivers. The largest is the Challacombe Longstone, situated on the western part of The Chains, on the south side of the saddle between the Chapman’s and Longstone Barrows. It stands 3m high, in a bog, 100m north of the head of a steep combe that is the source of the River Bray. The axis of the stone points directly towards it.

The Buttery Stone is also set at the head of a steep combe, along the south-west ridge. Now the thick sandstone slab, 1.4 m high, is incorporated into the boundary wall that forms the Devon-Somerset border along the ridge road. But the axis of the stone is not aligned with the wall, as a boundary stone would be, but down the combe (Eardley-Wilmot, 1983: 45). In the combe is a stream that is now only a tributary of the River Mole, but may once have been seen as the source. The Mole was once called the Nymet, an old word meaning holy or divine, remembered in the village
names downstream (Eardley-Wilmot, 1983: 45). (Aqua Arnemetia was the Roman name of the healing springs of Buxton in Derbyshire, and ‘nemeton’ is a related word meaning holy place). Others not surveyed include a lost stone at the head of the Portford stream below Withypool stone circle, and a stone at the source of the River Heddon, but rejected as a rubbing stone by Quinnell and Dunn (1992: 31).

Another longstone 1.3 m high on West Anstey Common is set at the head of a steep north-east facing combe, on a small, scooped platform, and the spring is approximately 150 m down the combe. Two other stones are set at the heads of combes. One is a small stone off to one side of Long Holcombe, but directly in line with a long straight section of the combe running WNW to ESE. The second is noticeably placed on a small but prominent rise (245 m OD) along the ridge running north-west from Kentisbury to the coast above Combe Martin. The stone is 1.5m high x 0.8m wide, and stands at the junction of the ridge overlooking the saddle to Great Hangman (318 m OD) to the north, with the axis of the stone at right angles to the summit. Directly south of the stone, however, is the steep Buzzacott Combe, with the stone perhaps 150 m from the source. The site ably demonstrates how a single stone can incorporate several aspects of a sacred geography. The associations with water may also be more than symbolic, as the dowsing survey for many of these sites demonstrates.

8.13 Dowsing survey and results
The survey was prompted because dowsing challenges our traditional assumptions about the relationship between humans and the environment (as discussed in Chapter Three), providing an alternative to the dominance of vision in traditional survey methods. Originally it seems to have been used in mining for locating minerals (Fig. 8.29; Fig. 8.30) (Agricola, 1974) [1556], only later being used to detect underground water. It is also used for archaeological purposes (Barker, 1982: 132), although sometimes with mixed results (Bailey et al., 1988). Claims have often been made concerning dowsing reactions and prehistoric sites. For example, French dowsers in the 1930s suggested that megalithic sites were located over the crossing of subterranean streams (Diot, 1935; Merle, 1933). These ideas were taken up by the British dowsers Captain F.L.M. Boothby (1935) and archaeologist R. Allender
Smith, a leading authority on prehistory (Keeper of British and Roman Antiquities at the British Museum, and Director of the Society of Antiquaries). Smith claimed barrows and standing stones were situated above ‘knots’ of converging lines (Smith, 1939). The ‘knots’ became known as ‘blind springs’ and formed the basis of the work of retired barrister Guy Underwood. His work and articles originally appeared in the journal of the British Society of Dowsers, but were published posthumously under the title The Pattern of the Past (1973). The papers of Boothby, Smith and Underwood and others have since been published together (Graves, 1980).

Underwood formed a complex theory of ‘aquastats’ and ‘tracklines’ which he called a ‘geodetic system’, and maintained that water divining formed part of prehistoric religions. His results and methods were questioned by other dowsers (Whitlock, 1982: 99), and many felt he had gone too far, “dogmatically making the most extraordinary claims” (Devereux, 1991: 179). Much of this work has since become entangled with New Age beliefs of ‘earth energies’. The earth energies concept was originally only a research idea that has since become accepted as ‘fact’ although there is a smaller number of people who seek proper methods and evaluation of these claims (Devereux, 1991: 180).

Unlike ‘earth energies’, however, underground streams (more correctly ‘flow acquifers’) or water in fissures, should at least be testable. As a material reality, water is either there or it is not, and experiments into the possible causes of dowsing reactions have demonstrated that dowsers are reacting to a variety of natural phenomena (Devereux, 1991: 182; Maby and Franklin, 1939). Underground water has for the dowser an extremely distinctive and recognisable reaction pattern (Applegate, 1997: 69-77; Whitlock, 1982: 23). Given a large area free of other obstacles (that is, built up areas and disturbed ground), a dowser should be able readily to identify underground water reaction patterns, especially on open moorland.

When searching for underground water supplies today, most dowsers (or water finders) require knowledge of the geology, topography, and rainfall pattern of the catchment (Applegate, 1997:13). The geology of the Exmoor area is of sandstones, slates, shales and grits, inclined and planed, so that the actual topography reflects the erosion and drainage pattern rather than the underlying geology, which is of porous sedimentary rocks. There are numerous minor geological faults.
Traditionally many dowsers have used a forked twig, but in fact all sort of indicators are used, and I used a pair of angle rods (‘L’ shaped) made from the wire of two coathangers! These are quite sufficient and more sensitive than a twig (which tends to dry out and lose its flexibility). From several years’ practice and experiment I knew what kind of reactions I obtained from buried archaeological features, but I had not specifically dowsed for underground water prior to the survey, so I did not quite know what to expect. From the start, and with experience gained during the survey, I found that reaction over underground water creates a distinctive set of sequential movements of the rod as I walked across the land surface, and I later found that my recording and reactions matched those found widely in the literature (Applegate, 1997) (Figs. 8.31; 8.32). Basically these consist of three close reaction bands on either side of the response, and a direction-of-flow indication over the course of the underground water itself (Fig. 8.33).

The survey was based on identifying any response to water on and around a site, by walking a series of transects extending up to 50m from the site in all directions, where possible. Any responses were noted and then followed in more detail, recording (a) width and course/direction of the response(s) along their length, (b) the proximity to sites, and (c) if there was any particular relationship between the pattern of underground water and the plan or layout of the site.

Before proceeding further with the analysis, some important questions require explanation. The fact that underground water responses may be found on or close to sites is of little consequence if the entire area has similar responses, so some form of negative testing is required to assess whether these perceived associations are meaningful or coincidental. I therefore decided on two areas in which to walk long transects across areas of moorland containing sites, and surface streams (Fig. 8.34). The first transect ran for 1.5 km west to east across Brendon Common from the B3223 past the settings of Brendon Two Gates and Hoccombe Hill II to the wall on Hoccombe Hill. The results were unequivocal. There were responses to water at both the stone settings, but none in the 500m between them. One surface stream was noted and finally two broad responses to underground water located at the eastern end close together in the last 100m before the wall. The second transect was walked along the south-east flank of Lanacombe, where there are five settings spread out over 1 km.
All the stone setting sites had some response to water either through or adjacent to the site area, on a north-west to south-east direction, but there were no responses in between the sites, apart from one surface stream. All the sites also had a background reaction not of water, but one which I attribute to bedrock. The clear implication is that the sites were deliberately located in close association to underground water features.

For the survey, of the original 85 sites surveyed, seven were discounted due to being possible rubbing stones, later boundary stones, or inscribed stones. Of the remaining 78 sites, eight sites (10.3%) had no dowsing reactions to underground water within the surveyed area, and one site (1.3%) was not dowsed due to extensive surface damage and thick heather cover, which may have interfered with possible reactions. The remaining 69 sites showed a variety of responses and reactions ranging from low strength and insignificant responses to quite extraordinary and close associations to site location, plans, and even stone alignments. Some 27 sites (34.6%) had low and relatively insignificant responses, with no clear evidence of relationship to the sites, or vice versa. Mid-level responses on 26 sites (33.3%) ranged from patterns of underground water responses alongside sites, running through the site area (sometimes several streams), or running up to the exact edge of sites (individual stones correlating with the edge of the line of reaction bands), for example at Winaway and Exe Plain. The higher level responses on sixteen sites (20.5%) were stronger, and showed considerable correlation to the plan and shape of sites, even to the extent that individual stones were consistently aligned in the same direction of the underground water responses, for example at Squallacombe I and Yenworthy Common.

Some sites showed quite extraordinarily close associations between the pattern of underground water responses and the site plans. Chapman Barrows had a response that started upslope to the north of the site and ran down either side of the monument, completely enclosing the area of the site up to the edge of the stones. A similar pattern is found at Porlock Allotment I, where the area of the stones is ‘enclosed’ by several overlapping responses. Again, at Brendon Two Gates two responses converged on the site from upslope. At the short stone row of Longstone Barrow there are responses running downhill at right-angles to the site; one on the east is
bedrock the other to the west is a 50m-wide water response. Both stop right at the
dge of the line of stones. On Yenworthy Common the axis of the stones mirrors that
of the course of the response, which extends slightly beyond the gap of the two
stones. At Mattocks Down there are two responses that split the original site in half.
The main response starts midway between the area of the original two standing
stones, and is 55m wide running west north-west to east south-east, the northern
boundary of which may have equated with the line of the original row. The second
response starts in the same area, but runs in the opposite direction, east south-east to
west north-west, in a 45m wide band. As I noted in my field records ‘it therefore
seems the two stones straddle what maybe the actual watershed’. Other examples
could be given.

Now I am not suggesting that people in the Neolithic or Bronze Age wandered the
landscape with divining rods, waited until they got a reaction and decided to
construct a stone setting there and then. Dowsing is a cultural practice in the present
and relatively recent past. We cannot know if prehistoric societies were aware that
what they experienced was underground water or bedrock, or whether they attributed
some sacred significance to what they felt. However, they would seem to have been
aware of something in order to have located the sites and stones with such accuracy.
These quite extraordinary correlations seriously suggest that there is a case to
answer, but the evidence needs to be put into a meaningful context.

8.14 Discussion
The survey has successfully identified several different types of locations on Exmoor
in which monuments were constructed in prehistory. These range from unobtrusive
and largely hidden sites, often of small scale, to sites with views, again some quite
small and not particularly noticeable, to much larger sites deliberately placed in
specific landscape locations where they are determinedly visible. The range and
variation of landscape locations have been interpreted not just on the simple basis of
proximity to particular features or not, but also in terms of how these locations may
have been used, or had meaning for prehistoric societies. The latter approach is more
interpretative, but based on a range of archaeological and ethnographic evidence
really begins to make sense of why monuments were constructed in some places and
not in others. The topographical characteristics of a sacred geography have also been identified for some sites.

Many, though not all, of the smaller sites are typical of locations often found in the ethnographic literature on hunter-gatherers. Some are hidden, others afford good views for monitoring movement, but all are on a relatively small scale, and even lack some of the geometrical formality of other settings, though this may be partly due to poor survival. They generally, though not always, have proximity to a number of natural features such as outcrops, boulders, springs or views to distinctive natural landforms. These would not seem important if it were not for the overall lack of such features around other sites, although these are not entirely exclusive features. The concerns of some of these hunter-gatherer type-sites seem quite distinct, but others blur into those found amongst other types of site and location. This is particularly evident in those natural locations which would tend to funnel movement of people and/or animals, and that allow views or enable some form of monitoring or ‘advertising’ of the place, as a form of territorial behaviour.

An interesting question is whether some places were already important in the Mesolithic for these reasons, but which were later adapted by the building of monuments. I would certainly argue that some places evolved in this way. This may be indicative of some continuity between hunter-gatherer locations and later nomadic herders or pastoralists of the early Neolithic. Certainly some sites show a possible relationship to locations important for people moving through the landscape, such as passes or upland:lowland divides. But this assumes implicitly that stone settings were built by mobile societies, and I do not think this is entirely the case. They may actually have been constructed over quite a range of dates and in relation to different activities.

For example, the pattern of sites on Cheriton Ridge and Furzehill Common shows some remarkable similarities in relation to the topography, and the proximity of hut circles along the slopes of these ridges and valley systems might suggest somewhat more permanent settlement. The stone setting sites (though not all), would perhaps have served the needs of respective communities based along the ridges and valleys. The pattern of sites around the upper ends of river systems not only denotes access to
higher ground, but is also close to areas of subtly lower land, perhaps suitable for more permanent, or at least seasonal, settlement. Examples include the cluster of sites around Badgworthy Combe with its large deserted medieval settlement (the model for the Doones' stronghold in R. D. Blackmore's *Lorna Doone*), and the area of Pinford, between Trout Hill and Tom's Hill, where there is a significant cluster of monuments and prehistoric settlement remains. Despite some destruction, these areas probably retain some relation to original distributions, and the absence around them is not wholly due to later removals.

The interpretation of stone setting locations to particular economic functions and concerns should not distract us from the importance of these places as the focus for religious belief and ritual. It has been one of the central concerns of this study to show the interconnected nature of these aspects of prehistoric life. The association of large single standing stones with stream heads and water sources would seem to have clear implications for beliefs in fertility and water, and probably agricultural systems. I would argue that some, though not all, of these single stones are probably mid to late Bronze Age. But this does raise the question of relative dates for other stone monuments. What is the chronology of monument construction on Exmoor?

I have already suggested that a hunter-gatherer worldview can be identified in the concerns of a number of places. Some of these have small settings, while others have large settings formalizing the importance of the place. But where do the stone circles and large stone rows fit in? The location of these monuments is actually around the edge of higher Exmoor, while the majority of the settings are found more centrally. Although survival plays a part in the distribution, this pattern is interesting. The stone circles are generally considered to be large communal monuments, and in the uplands, probably of the late Neolithic. Is for example Porlock stone circle earlier, later or contemporary to the large setting on Almsworthy Common, a site with hunter-gatherer concerns? Are the stone circles and especially the Porlock circle the products of communities from around the edge of the moor? Were they consciously demonstrating a different worldview to that of other communities in a land still largely occupied by hunter-gatherers, as Sherratt has argued (Sherratt, 1995: 252). Or are the large settings earlier, and replaced by the more dramatic circles? On balance I would argue that the large settings are more likely to be a response, perhaps by the
local population, in the process of becoming Neolithic. The settings are unique to Exmoor, surely indicative of a largely indigenous and partly local response.

Either way, monuments changed the way the land was understood, and the large stone rows also acted in ways to break up patterns of movement and direct attention to particular topographical features. Sited obliquely to saddles, and spurs of high ground, but also aligned on higher points, they broke up the land as a continual experience, and concentrated the focus on particular places. Again these were the major ridgeways and watersheds. These major monuments also probably acted as ceremonial places for dispersed communities, and probably pre-dated the smaller examples elsewhere. The majority of settings therefore may well belong to the period after the construction of these sites and were the focus of ritual for communities and family groups.

Relative dating is difficult, but the settings overall probably pre-date the large round barrows on summits, as they generally display different concerns. They do not dominate the land as the barrows do. The overall lack of association between settings and barrows is noticeable, even where they are relatively close together. The barrows belong to a period where the land is nearly domesticated, but the settings still show some humility in their choice of site, although there is a conscious connection to water with many of them, probably as part of a larger cosmological scheme.

Monuments seek not only to represent the creation of order in places and areas that were already held sacred, but may also be constructed in places already important for other reasons. In either case they change the way that place is understood thereafter. The change from veneration of natural places to monument building may represent a conscious attempt to sanctify and protect the sacred, but also to change the human relationship to the sacred, and to manipulate people’s understanding of that relationship. This change may not have been straightforward and the continual use of natural features in monument design could be indicative of an underlying tension and anxiety. In prehistory I would argue that this change is central to understanding the nature of the transition to agriculture, and the monuments were one of the means that were used to demonstrate and achieve it.
8.15 Conclusion

The role of monuments in the transition to agriculture has been the central theme of this chapter, in particular how elements of the natural world were either included or excluded from the designs of monuments of different periods. The fact that reference was continually made to the natural environment in huge numbers of different cultural constructions is indicative of the importance of the natural world for prehistoric communities. The use of topography, proximity to rocks or streams, and use of astronomical sightlines in the design of monuments may have been intended to put the message of the monument beyond question, in effect the naturalising of an ideology (Bradley, 1985: 9). I suggest that the dowsing evidence should be seen in this context.

The evidence from Exmoor does show sites exhibiting the type of concerns expected of hunter-gatherer locations, but it also demonstrates the evolution of some of those places into more visually dominant locations than they were before. The sites are found in the sorts of places we might expect of mobile societies, on upland to lowland divides, and passes. The style and design of sites is suggestive of a distinct tradition and identity. Relating monument locations to possible economic and social parameters is a useful way of making sense of otherwise silent stones, but I would also suggest that we might be overlooking their more profound and important role in prehistoric life. On Exmoor, many of the smaller sites exhibit a humility found lacking in the more dominant location choices of later sites, despite the small size of the stones. Elsewhere, large, spectacular, sites are often characteristic of the Neolithic. To what did people owe this new found confidence, if that is what it is? I would argue that we have overlooked the real significance of the human relationship to land and the sacred, particularly for hunter-gatherers, and a better understanding of how this changed opens up new understandings of the nature of the transition to agriculture.
Fig. 8.1 Branscombe's Loaf, Dartmoor: a stone ring around the natural tor.
(After Turner, 1990)
Fig. 8.2 The topographical setting of the Ring of Brodgar and the Stones of Stenness, West Mainland, Orkney. (After Richards, 1996b).
Fig. 8.3 Example of a Lithic Monument Survey Data Record Sheet (page one).
4. Earth

a) There are some small mounds situated through the crest at the northern end.
b) The location of these mounds is uncertain at the northern end and may be indicated in the southern end, so may be positioned at the northern end. In general: 1500-1600 A.D.

5. Water

a) There are scattered patches of grassy mounds and around the central.
b) The central is made of small and larger patches of grassland around the central.
c) There is a spring in about 300 cm above the central.

6. Sky

a) No distinctive features. The sun rose in 4.5 south, although regular
b) No distinct features.

Fig. 8.4 Example of a Lithic Monument Survey Data Record Sheet (page two).
Fig. 8.5 Example of a Lithic Monument Survey Data Record Sheet (page three).
7. Material elements

a) Shovel scars, possibly made by a Prehistoric knife. A variety of retouched blades, points, and projectile points were examined.

b) Yes.

c) Extinct,难定

d) Bone material of uncertain collection and time of death.

e) Not known. Almost certainly extinct.

f) Analysis yet to be undertaken difficult, but probably high plane constructed.

8. Dowsing survey

a) Little to no response within the impact area or site itself, but see below.

b) There is a weak response on all four sides of the site. Not strong, but considered.

c) There is a strong response along NW edge roughly parallel to lines 4-6 of a weak
   response which runs roughly E-W, but beyond these it is cancelled out by a
   strong response along another roughly E-W line (fluctuation). This area is about 25-30m wide. However on the S edge only the NW
   side is in line cancelled out by a strong response along another roughly E-W line
   here S edge of the site parallel to lines 9-5. Then the lines criss cross and NE side of the site.

   There is a very clear opposition between the SW of the weak response area and the alignment of the rolling. In some cases down to the same
   mate. (check continuation plan he was J. open)

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Fig. 8.6 Example of a Lithic Monument Survey Data Record Sheet (page four).
Fig. 8.7 Distribution map of Exmoor lithic monuments recorded during the survey.
Plan of the Remains of a Dolmen (?), Battlegore, Williton, Som.

Sketch to scale showing the probable original position of the three stones forming a Dolmen at Battlegore.

Stone I is about 10 ft. in length and 2.25 ft. in thickness. Stone II, 7.4 ft. in height, is shown in its vertical position, standing in its socket-hole. Stone III is shown as 6.5 ft. in height. (It has perhaps been broken). What remains is represented in dotted lines in the leaning position in which it was found.

Fig. 8.8 Plan and reconstruction of a dolmen at Battlegore, Williton. (Adapted from Gray, 1931).
After Thomas Westcote, 1630.

A the great stone 9 foot 6 inches
B the other great stone 5 foot 6 inches
C C C the row of 23 stones

After Chanter and Worth, 1905.

Fig. 8.9 Antiquary's plan and reconstruction of Mattock's Down stone row. (Adapted from Chanter and Worth, 1905).
Fig. 8.10 Plan of stone setting at Exe Head (The Chains Valley site). (After Chanter and Worth, 1906).
Fig. 8.11 Plan of Almworthy Common stone setting. (After RCHME, 1992).
Fig. 8.12 Plan of Porlock stone circle. (After RCHME, 1992).
Fig. 8.13 Plan of Withypool stone circle. (After RCHME, 1992).
Fig. 8.14 Plan of Culbone stone row. (After RCHME, 1992).
Fig. 8.15 Plans of Madacombe stone row. (After RCHME, 1992).
Fig. 8.16 Plan of Wilmersham Common stone row. (After RCHME, 1992).
Fig. 8.17 Plan of Horsen stone setting. (After RCHME, 1992).
Fig. 8.18 Plan of Hoccombe Hill I stone setting and location map. (After RCHME, 1992).
Fig. 8.19 Plan of Winaway stone setting and location map. (After RCHME, 1992).
Fig. 8.20 Plan of the 'Whit Stones' stone setting and location map. (After RCHME, 1992).
Fig. 8.21 Plan of Cheriton Ridge IV stone setting. (After RCHME, 1992).
Fig. 8.22 Plan of Clannon Ball stone setting and location map. (Adapted from RCHME, 1992).
Fig. 8.23 Plan of Beckham Hill stone setting (for location see Fig. 8. 24). (After RCHME, 1992).
Fig. 8.24 Plan of Swap Hill stone setting and location map. (After RCHME, 1992).
Fig. 8.25 Plan of East Pinford enclosure and location map (After Best, n.d.).
Fig. 8.26 Plan of Brendon Two Gates stone setting and location map. (After RCHME, 1992).
Fig. 8.27 Plan of Furzehill Common V stone setting. (After Chanter and Worth, 1905).
Fig. 8.28 Plan of East Pinford stone setting and location map. (After RCHME, 1992).
Fig. 8.29 Using a forked twig for dowsing or divining. (After Devereux, 1991).

Fig. 8.30 Sixteenth century German miners using dowsing to locate mineral deposits. (After Agricola, 1974) [1556].
A = the main reaction band directly above the flow. B and C are side bands that make up the main stream band. This always consists of three reactions. The same trio will be found at the depthing bands.

Fig. 8.31 Patterns of dowsing reaction bands to underground water. (After Applegate, 1997).
Fig. 8.32 Simplified section diagram of 'trio' dowsing reaction bands. (After Applegate, 1997).

Fig. 8.33 Plan, or overhead view of dowsing reaction bands and method of water finding. (After Applegate, 1997).
Fig. 8.34 Sketch map of dowsing test transects on Exmoor.
CHAPTER NINE

DISCUSSION

9.1 Introduction

So far I have considered the various aspects of this study in relative isolation from each other. But if we are to make sense of the different data sets from Exmoor, then a further stage of interpretation is required. To place Exmoor in its south-west context, and that in turn into the wider happenings across north-west Europe during the Mesolithic-Neolithic transition, requires a broader approach. This chapter is not intended as an overview of the transition, but rather an interpretation of several different aspects of the process, which combined with the stance taken in the earlier chapters of the study, may show how the hunter-gatherer world view was eventually transformed into a quite different understanding of the human to environment relationship.

I have therefore attempted to outline interpretations of the role of exchange in the transition and how new forms of material culture may have been powerful messages in changing people’s understanding of self and place. A corollary of this is the evidence of conflict both in north-west Europe and south-west England, and the possible reasons for this violence. I hope to show how Exmoor fits into these wider patterns, and how the fieldwork evidence of monuments incorporates elements of hunter-gatherer concerns with land. How this changes during the transition is taken up in the theme of cosmology, and I finally draw together an interpretation of the Neolithic world view. Underpinning all these different themes are the constants of the importance of the relationship between land and people, derived from the knowledge of religious experiences, and the sacred nature of places.

9.2 Fieldwork summary

Until the last twenty years or so relatively little archaeological or palaeoenvironmental work had been done on Exmoor. The complete lack of early
evidence for arable agriculture demonstrates the irrelevance of the traditional culture history framework when applied "to the culturally conservative ways of farming communities that dwelt on prehistoric Exmoor" (Francis and Slater, 1990: 19). For example, after practically three millennia of "low-level activity" on Hoar Moor, a very different type of land use is visible from 1600 BC to AD 240, with alternating woodland clearance and recovery phases. Both arable and pastoral farming are evident, and similar activity is recognised on The Chains at this time, the main clearance phases for both profiles perhaps coming at the end of the Bronze Age, and probably early Iron Age. This phase probably corresponds to the evidence of prehistoric field boundaries, enclosures and hut circles found on Codsend and Hoar Moor (Patterson and Sainsbury, 1989). This is in contrast to the evidence from Dartmoor, which is marked by increased clearance activity from the Bronze Age onwards, with the reaves (c.1600 BC) laid out in an already open and cleared landscape. Similar evidence has been very hard to find on Exmoor. Partly, this could be attributed to the relative lack of available stone for wall construction, so early boundaries may have been hedges, as on Dartmoor in fact. These would not have survived.

So apart from a possibly early prehistoric enclosure in the central moorland area of East Pinford (Best, n.d.), the huge number of new sites found by Richard McDonnell's survey work, and more recently by RCHME, there is no firm evidence of the extensive large scale co-axial field systems found on Dartmoor and elsewhere. Isolated, smaller, patches of prehistoric fields are known, but not all of these exhibit evidence of co-axial systems. However, this is not to deny the possibility of cereal agriculture, as Exmoor would not have been a marginal environment in the same way as it is today. However, considering the amount of survey work now carried out, I think we may have to accept that there may not have been the large-scale planning of field systems found elsewhere.

The lithic evidence was studied primarily by using different raw materials as broad chronological markers. The pattern of lithic scatters on and around Exmoor is patchy, reflecting the activity of collectors and chance finds. Only along the coastal belt and on the Quantocks and the Brendons are more small sites known (SMR). Typologically the evidence has shown the use of Greensand chert, pebble flint and
nodular flint as broadly representative of the early and late Mesolithic and Neolithic respectively. Exmoor therefore seems to replicate the general pattern of raw material use elsewhere in the south-west.

Hawkcombe Head is primarily a later Mesolithic assemblage, with evidence of a very minor earlier Mesolithic element of Greensand chert. The late Mesolithic assemblage, predominantly of pebble flint, and the ratio of microliths to scrapers, is indicative of an upland hunting camp or camps, perhaps used on a seasonal basis. But the artefacts and tools are largely impoverished and undiagnostic, revealing the limitations of the size and poor quality of the raw material. There are very few real blades. Less than half approach the length:breadth ratio of 2:1, but most are outside these parameters. There is only extremely limited later Neolithic or early Bronze Age activity. Some of the nodular flint may be from Orleigh Court in north-west Devon, but if some of the pebble flint also comes from west of Exmoor (Grinsell, 1970), it would not be inconsistent with such resource collection strategies.

By comparison, Selworthy Combe is dominated by nodular flint, making this a site of predominantly Neolithic date. The small but significant numbers of pebble flint do indicate later Mesolithic activity, but without microliths (possible collecting bias), it could also be early Neolithic. The leaf-shaped arrowheads suggest an earlier rather than later Neolithic date, although these do have quite a wide chronological spread. There are again only a few larger, squat, flakes associated with later periods.

Kentisbury would appear to be multi-period. The well-prepared striking platform preparation of the pebble flint is suggestive of later Mesolithic activity, but lack of microliths again might suggest early Neolithic work, as it is mirrored by similar attributes in the nodular flint, indicative of the early Neolithic. This does indicate some cultural continuity in the flint working tradition, though most is not particularly diagnostic. But there are also more rougher and larger pieces, with hinge fractures more in keeping with later Neolithic and early Bronze Age material. There is a significant amount of nodular flint, but not necessarily from Beer Head, again, of more local origin, possibly from Orleigh Court.
In the Blackford Farm collection in Porlock Vale, both early and later Mesolithic activity is represented, but there are far fewer examples of later Neolithic and early Bronze Age dates. Without any real concentrations of material, it is perhaps not surprising that the background noise is mainly Mesolithic in character, and that it shows the sort of activity that was spread across the landscape, rather than concentrated in one place. However, the number of reused pieces in the collection does suggest repeated visits to the same locations over a long period of time.

The evidence of the monuments on Exmoor is potentially quite complex. There are no early Neolithic monuments on higher Exmoor, and this seems to be a real negative. The stone circles and larger stone rows, widely found elsewhere, are restricted to the edge of the central upland area of Exmoor. These larger sites and larger stone settings seem to occupy locations that can be identified as significant in terms of their visibility, relationship to patterns of movement, and cosmological schemes. The location of some of these larger sites on the main watershed would suggest that they were important meeting places. They may have had more than a purely local significance, although there are subtle differences in the concerns demonstrated.

Some of the smaller stone settings are inconspicuous, and display proximity and concerns with rock outcrops, streams, and/or views, and distinctive landscape features. In this respect they seem to be located in places that exhibit many of the characteristics found in the ethnographic literature of hunter-gatherer type sites. Many of the medium-sized sites show evidence of proximity to possible patterns of movement and upland to lowland divisions. These different concerns may therefore indicate parallel traditions or different ages. This is perhaps indicated by the juxtaposition of examples of small, inconspicuous sites close to larger, more visible settings. Although survival factors need to be taken into account, the central area of Exmoor shows quite dense concentrations of settings. It is also quite possible that some places were important in the Mesolithic but no monuments were built in these places until the later Neolithic. This does suggest continuity with earlier traditions, but there is also an element of discord between the stone settings and larger rows and stone circles. Chronologically the lack of association to large round barrows suggest
the stone settings are earlier, and the variety of sizes, designs, and landscape locations may actually suggest a range of dates.

How, then, can we use these fairly basic data sets to interpret the transition to agriculture on Exmoor? An analysis of the relationship between land and people is one possibility. For example, one of the important questions concerning the Mesolithic is the quite widespread decline in the general standard and quality of blade manufacture during the later Mesolithic (Pitts and Jacobi, 1979). The evidence from Exmoor repeats the same pattern, with a continued reliance on poor-quality beach pebble flint. Early Neolithic sites tend to produce better blades than later Mesolithic sites. Conservative traditions of tool making may be one reason. The development of regional traditions in tool working in the late Mesolithic may be indicative of reduction in the size of territories and reduced mobility (Darvill, 1987: 46), and may therefore also suggest “a recurring relationship between particular communities and broad sections of the landscape” (Edmonds, 1995: 23).

One of the main questions for the fieldwork was whether there was demonstrable evidence of continuity and a ‘recurring relationship to the land’ from the late Mesolithic through the Neolithic. Two of the lithic collections, Selworthy and Kentisbury, indicated use of the same area or site in different periods, and at Kentisbury, a large Bronze Age round barrow suggested that the place also retained some importance for later periods. There was much re-use of artefacts of different periods in the material from the Blackford Farm collection. But by contrast the late Mesolithic site of Hawkcombe Head shows virtually no evidence of later artefacts. Why was this? Did these people assimilate the new culture, become herders of domesticated animals, and only use the uplands for pasturing pigs and cattle in the summer months? The lack of evidence for early Neolithic monuments, and again the indications of fairly late dates for clearances compared to say, Dartmoor, do tend to indicate that not all the transitional processes we see elsewhere necessarily occurred on Exmoor. The pattern, such that it is then, is uneven and variable. The different strands of evidence need to be assessed together here, and placed in a wider context. We may then be able to detect the outlines and draw together a larger pattern.
9.3 The south-west context: settlement and exchange

What is the nature of early Neolithic monuments and settlement in the south-west? Apart from the variety of lithic scatters, much of the evidence of settlement comes from hill-top sites: for example, Hembury in east Devon occupied around 4000BC, High Peak, Sidmouth c.3500 BC, and Haldon above the Exe valley (Fig. 9.1). All have examples of early Neolithic pottery, flint, and at Haldon a rectangular timber house (Pearce, 1981: 37). More recently another site, at Raddon, west of the Exe valley, has been ascribed a Neolithic date, and is now recognised as a causewayed enclosure, when it was originally seen as a later prehistoric hillfort (Griffith, 1994: 88). A long barrow from Uplowman, near Tiverton, was constructed in an area already open and cleared area during the Mesolithic, in a location considered a “likely spot for activity, being a slight promontory overlooking the valley” (Smith, 1990: 24-25). A cursus monument and oblong ditched enclosure are also known from nearby Nether Exe (Griffith, 1994: 89). In Somerset, the hilltop of Norton Fitzwarren, north-west of Taunton, was also occupied, as was South Cadbury in east Somerset. These all became hillforts in later periods. Similarly, Hambledon Hill and Maiden Castle in Dorset are other early Neolithic sites later used as hillforts. Further west down the peninsula in Cornwall, the hilltop sites of Carn Brea (c.3800 BC) and Helman Tor also acted as enclaves for early Neolithic activity (Mercer, 1986: 53; Pearce, 1981: 38). The enclosed summit of Whittor on Dartmoor may suggest that it has similar origins (Quinnell, 1994: 53; Todd, 1987: 76). No early Neolithic sites such as these are known from the Exmoor area to date. So how was Exmoor drawn into the Neolithic world? One way to trace the pattern of the transition in the south-west is through the evidence of prehistoric exchange.

There is certainly good evidence for exchange in both the earlier and later Mesolithic. Finds of siltstone pebble tools from Cornwall have been found on early Mesolithic sites in Surrey, Hampshire and Sussex (Rankine, 1954: 41). Chalk flint has also been found in Cornwall on early Mesolithic sites at least 100 miles from the nearest source, although this could represent foraging trips, rather than exchange. Quartzite maceheads have also been found widely distributed across southern England, and many of these would seem to have derived from the Bunter Beds of the Exe valley in Devon and Somerset (Rankine, 1956: 57). Portland chert is found in west Cornwall, and in small numbers in eastern Exmoor, across central southern
England (Darvill, 1987: 47). The importation of these materials often into areas that were already well provided with lithic sources suggests that there is “no economic rationale for these patterns” (Care, 1982: 282). Early Neolithic groups may have been absorbed into these pre-existing networks, where the sources of flint, chert and volcanic rocks were known, and “the routes of dissemination understood” by Mesolithic hunter-gatherers before the beginning of Neolithic settlement (Mercer, 1986: 44).

Stone axes form the main evidence of Neolithic exchange. Many of the stone sources have been approximately identified, or sourced, and classified into Groups. But of the ungrouped axes without a definite source, the majority comes from the southwest. They dominate in east Cornwall and north Devon, and form the main type of stone axes found from the Exmoor area, mostly around the margins of the moor (Mercer, 1986: 45; Grinsell, 1970: 22-23). Other ‘grouped’ axes found around Exmoor also come from Cornwall. Mercer suggests that all these examples are indicative of “relatively small-scale local activity or exchange, reaching into areas that did not lie athwart the principal routes of transmission to which the larger centres were keyed” (Mercer, 1986: 45). These ‘larger centres’ are precisely those hilltop settlements listed above - Carn Brea, Hazard Hill, Hembury and Maiden Castle - which become the foci for products operating in an overland exchange network (Care, 1982). The main prehistoric route from Cornwall has been postulated as running through mid-Devon north of Dartmoor (Griffith, 1985), and where there is a complex of monuments, including a large Class II henge, at Bow. Here the lithic evidence was of a ‘special’ late Neolithic character, but also with a substantial Mesolithic element (Berridge and Roberts, 1986: 8-9).

This might suggest that Exmoor was already somewhat peripheral to much early Neolithic activity, and routes of transmission. Stone axes were moving from west to east and other lithic material, chalk flint and Portland chert moving in the opposite direction. To understand the significance of the exchange network, and how the prehistoric societies on Exmoor might have been drawn in or reacted to the process, I suggest we need to look at the larger context of the relationship between land and people.
9.4 Land and people

I have outlined the differing concepts of tenure and territoriality in hunter-gatherer and small-scale societies generally in Chapter Three, but I want to show just how important the hunter-gatherer relationship to land is for individuals and social groups. The distinction made by Ingold is that tenure is a means of engagement of nature in a system of social relations, while territoriality “engages society in a system of natural relations” (Ingold, 1986: 136). This is a neat distinction, but tenure is more specifically about social relations that are constituted by the way in which a local area or landscape is “worked or bound into the biography of the subject”, and/or into the development of the social group of which the individual is a member (Ingold, 1986: 137). The sense of Self is “defined, sensed and expressed in the context of group membership and relation to the land” (Silberbauer, 1994: 127). Membership of the community means that an individual acquires a relationship to the environment upon which their survival depends. Therefore the very idea of the Self, as we understand it in a highly individual sense, is largely a modern construction, with psychological overtones, and cannot necessarily be applied to pre-capitalist societies (see Shanks and Tilley, 1987: 62; Thomas, 1996: 49).

Likewise for hunter-gatherers the idea of personhood is not solely tied to being human. The difference between humans and non-human animals is not between a person and an organism, but between “one kind of organism-person and another” (Ingold, 1996: 132-3). Hunter-gatherers tend to stress the unity between creatures that underlies their respective differences: they assume the relational unities before exploring the differences. In other words they highlight the way in which “human and animal share a common existential status” (Ingold, 1996: 133). Personhood in this sense is the potential to become a human, or any other animal. Foragers therefore believe that animals are essentially the same thing as themselves. Hunting completes this circular reasoning: hunt it, consume it, it becomes you. Their speech and artifice translate these things into humans and vice versa. This can only be done “because they are these beings to begin with” (Martin, 1993: 86), a form of circular but effective reasoning reinforced by mythology and stories of transformation. It is this vision of selfness, intimately tied to land, social group, and to plants and animal
beings, that actually defines for a hunter-gatherer what it means to be human, as “only a fool would see himself as exclusively a Human being” (Martin, 1993: 18).

Membership of the group and to the land is as important to the sense of Self as learning and personal knowledge, and if there is disruption to community and land, there is a corresponding sense of negation and diminishing of the Self (Silberbauer, 1994: 127). Using the Pintupi of Western Australia as an example, Ingold (1986: 137) points out that a “person identifies with a country only because of his involvement” throughout his life “with particular others who are known as his ‘one country men’”. In effect, person and country are one and the same, as the individual derives his or social identity and attachment to places through this relationship to the landscape. Therefore one individual’s ‘country’ will be slightly different from another in his social group. But it is an identity based on the practice and knowledge of doing everyday activities. Being is dependent on doing. To exist, to have an identity, “requires meaningful action which expresses that identity, in order to Be, one has to Do”, and this requires a reciprocal relationship to land, to receive from and to give to (Silberbauer, 1994: 127). In this way the identity of both individual and land is affirmed (Silberbauer, 1994: 127).

The concept of giving and receiving between hunter-gatherers and land is analogous to the concept of the gift (Ingold, 1986: 138; Mauss, 1954). In gift exchange the object has a past, and its use forms a continuous process “expressing an intention or promise for the future through the fulfilment of past obligation” (Ingold, 1986: 138). Tenure of the land by a people should be seen the same way. However, territorial behaviour is quite different, as there is no sense of past or future, and no commitment.

The animating principle of the gift is an object that has a past, and is therefore similar to that of tenure, which also has a past, the biography of individual and group. But like a gift, land, or tenure of it, is not just a passive object, a mere container of resources to exploit (Ingold, 1986: 138). It has a spiritual quality, its productiveness and fecundity. In fact Mauss’s original model for the gift was the Maori concept of the productiveness of land, specifically its forest and game (Mauss, 1954: 8). Therefore in the case of the land and tenure, this spiritual quality derives from a
"transferral of the creative movement of social life from personal subjects to material substance" (Ingold 1986: 139). The ‘country’, or the land itself, is therefore “imbued with the power that grows the men who hold it” which requires periodic ritual renewal (repayment) if social life is to continue (Ingold, 1986: 139). Like gift exchange this involves the interchange-ability of places and people, so that “each appears immanent in the other” (Ingold, 1986: 139). It is therefore perhaps more accurate to understand tenure as “primarily spiritual in quality, rather than having anything specifically economic about it” (Ingold, 1986: 139, after Piddington, 1971: 240).

9.5 Land, identity and material culture: the role of exchange

If there is obviously a close relationship between land and people, and ethnographic accounts constantly reinforce the view, does this not imply some cultural significance to the material culture produced by a group from a particular territory? Unlike today, in the global scale of the economic system, practically everything that prehistoric Mesolithic hunter-gatherer societies hunted, gathered, produced or manufactured, came from the territory they inhabited. What they made, came from where they were. Where they were, was who they were. In this sense, their material culture is the land they inhabit, and therefore part of themselves. What then are the implications of exchange, and obtaining items from other peoples and other territories? Because if the identity of the people is bound to where they are and what they use, this makes the appearance of new artefacts from other lands and peoples potentially powerful objects. Hunter-gatherers have to be aware of the “metaphysical hazards of adopting a foreign technology” (Martin, 1993: 11). The initial spread of European trade goods to aboriginal peoples was first of all “aesthetic and spiritual”, a communication with the place of origin of the goods and the people who brought them. For example, imported copper pots cut up into earrings, spoke of a “newly expanded context of magic, of power, of humaness”, but, it was also something which almost unconsciously was “dangerously changing [their] definition of humaness in relation to place” (Martin, 1993: 12). We can perhaps extend the concept of the ‘habitus’ (Bourdieu, 1977), from the home and society, to include the whole environment. For hunter-gatherers, they are one and the same.
In this respect I want to explore the way polished or ground stone axes represented a new form of intervention in the natural world. Although the form of pecked stone tools was known in the Mesolithic, for example maceheads, they were usually based on symmetrically-shaped natural pebbles. Until the Neolithic, anything and everything that had been made was still recognisably the same material before and after the production process, whether stone, wood, bone, antler, hide, or plant fibre. For hunter-gatherers objects can be shared with the environment, where items “can be appropriated from the environment, used without effecting modifications, and then returned to it, directly or via other people” (Bird-David, 1992: 31). I am suggesting that this did not just reflect slow evolutionary processes but that the level of intervention in the natural world was governed by the religious beliefs of hunter-gatherer societies. The ‘reality of the sacred’ provided real limits to the amount of manipulation of natural materials that was acceptable to these beliefs. The functional aspect of Mesolithic tools is as much a product of these beliefs as it is a function of their subsistence needs.

The ground and polished stone axes of the Neolithic demonstrated a subtly different symbolic relationship with the surroundings. The “laborious process highlights the colour and qualities of the raw material to a far greater extent than flaking” (Edmonds, 1995: 51), and is symbolic of a conscious desire to manipulate the shape and final appearance of the object. The way axes were made, used, and deposited in deliberate ritual acts “may have been one of the media through which the concept of ‘being Neolithic’ was carried forward” (Edmonds, 1995: 55). Some were certainly used, but they could also be ritual objects at the same time. We should not divorce economics from religion. Many axes would also seem to have been deliberately deposited in rivers, for example the Thames, and other boggy areas, where they would be difficult to recover (Bradley, 1998b: 74; Edmonds, 1995: 53).

We know from ethnographic examples that gifts exchanged bring “prestige, friendship, enhanced social status and spiritual power to the giver” (Orme, 1979: 198). An artefact of stone or wood may be imbued with the power of the person who made it, and/or the place from where it came (Thomas, 1996: 154). In turn material culture helps to form the social identity of the group, and in this way we can see that artefacts are not passive, but have meaning beyond their purely functional uses.
The exchange network may have fostered specialisation in production of locally available goods for exchange, leading to differentiation of local groups “paradoxically differentiated through exchange contact” (Orme, 1979: 200). Movement was therefore always away from source, and objects could travel huge distances relatively quickly through exchange networks (Orme, 1979). Axes may therefore have been extremely potent symbolic messengers of a new relationship to the world.

The role of gifts and exchange can be seen as a potentially powerful system for instigating change. Therefore incorporating these ‘alien’ artefacts was “tantamount to speaking an alien tongue, with attendant realigning of spiritual power relationships” (Martin, 1993: 12). I suggest that the new forms of material culture of the early Neolithic undermined the identity and structure of late Mesolithic society, subtly changing the relationship to surroundings or place, and therefore of self. How was the identity of the hunter-gatherers of the south-west and Exmoor area changed by these artefacts? Were they accepted, or seen as potentially dangerous? This highlights another possible consequence of the relationship between land and people, that of conflict.

9.6 Frontier relations and conflict
Frontier studies have often characterised the interaction between foragers and farmers as one of mutual, though not always equal, benefit. For example, economic dependency may hide oppositions, where foragers trade bush meat, in exchange for “information”, offsetting increased mobility costs (Moore, 1985: 106-7; Tilley, 1989: 246). These relationships do not always overtly affect hunter-gatherers, although there is the potential to do so. The difference in the record of early Neolithic societies in northern and western Europe can be seen as resulting “in large measure from the active role played by indigenous Mesolithic populations and reflecting their distinct histories and internal social dynamics” (Armit and Finlayson, 1992: 672). This suggests that we should expect some variability in the archaeological record of contact between different groups. Although agriculturalists cannot be said to pose a direct threat to hunter-gatherers, they do “meddle in and muddle the patterns of
mobility on which the knowledge of the ecological and social environment is based” (Moore, 1985: 103).

Part of the problem is that in the past a single reason was sought as the model for change, and then applied universally, which ignores the local variability inherent in any such process. We therefore need to look at how the external influences of Neolithic culture would have permeated hunter-gatherer societies. Although some threat may initially be felt, and hostility, there would also be “curiosity about novel resources, techniques, and the way of life of the immigrant population was likely to be equally appealing” (Dennell, 1985: 124). We do not have to accept an immigrant scenario, but I would suggest that Neolithic material culture might not necessarily have been equally appealing to all members of a social group. Dennell suggests that the Neolithic may be more attractive to subadults or young adults (Dennell, 1985: 124), but does not explore the possible negative reactions of other group members. Older, senior adults may have rejected contact, or alternatively have actively engaged with Neolithic material culture as a means of furthering individual social status.

The development of complex hunter-gatherer groups may be one response. They accumulate or monopolise resources to some extent, and create indebtedness as other individuals cannot match the feasting activities which are the “carrot that lured communities into complexity” (Hayden, 1994: 231). However, complex hunter-gatherers can be as much a consequence of changes, for example the use of exotic goods, and regional exchange networks, as a cause of the transition. Some late Mesolithic populations may or may not have had direct contact with Neolithic groups but nevertheless adopted elements of the Neolithic ‘package’, such as domesticated animals, pottery and polished stone tools. However, it is not the adoption of the odd trait or innovation of Neolithic practice into the hunter-gatherer way of life which constitutes the Neolithic, but rather the “wholesale transformation of social relations which results from adapting an integrated cultural system” (Thomas, 1991a: 13). I would argue that those populations engaging in this kind of contact are no longer strictly Mesolithic either. For example, the Ertebolle culture of southern Scandinavia, seen as Mesolithic hunter-gatherers using pottery (Thorpe, 1999: 171; Whittle, 1996: 199), is an example of the failure of our divisive nomenclature. There may have been quite a complex variety of forms of interaction between hunter-gatherers and
Neolithic communities, ranging from a strict frontier to a mosaic of overlapping land use and activities. There could also have been a wide range of possible types of response from hunter-gatherers, and many different strategies could have been pursued. One that has not perhaps been widely considered is a strategy of plain avoidance.

It has long been remarked that the coastal distribution of late Mesolithic populations represented a form of ‘packing’, and that the coastal zones were utilised because of their rich environmental resources (Binford, 1983: 211-212; Renfrew, 1976). I suggest one reason that the monuments are found in those areas around the Atlantic Fringe, and are now generally accepted as the forager response to the transition, may be the end result of hundreds of years of movement and displacement of forager groups, west and north, away from the Linearbandkeramic (LBK) settlements. The process would only be avoided by hunter-gatherers resistant to Neolithic practices as long as there was space to do so. At the Atlantic, North Sea or Baltic coasts, they literally had nowhere else to go. In the western Netherlands of deltas and estuaries there is good evidence “for the continuation of forager traditions in the sixth and fifth millennia BC” (Whittle, 1996: 204). Local traditions can also be traced through later pottery-using groups. The larger pattern of monuments in western Europe is therefore consistent with the social dynamics of hunter-gatherer groups, in the face of external forces. Hunter-gatherer groups may move considerable distances a number of times over several hundred years, with a ‘knock-on’ effect beyond the actual contact zone or origin of the external threat (Brody, 1983: 22-3).

A delayed alternative, perhaps, is active opposition. In western Europe, there is evidence of conflict towards the end of the LBK sequence. Around the limits of the LBK settlement in eastern France and Belgium, there existed an unsettled zone some 20-30 km wide between the LBK settlements and the local late Mesolithic RMS (Rhine-Meuse-Schelde complex) (Keeley, 1992: 91). There is evidence that relations were hostile. A number of LBK settlements close to the edge of the zone were “extensively fortified”, while other sites inside the zone were not. The threat was external: that is, it came from the hunter-gatherers (Keeley, 1992: 92). There is other evidence of violence, for example the unexplained Talheim grave where the bodies of over thirty individuals - men, women and children - were unceremoniously
dumped in a pit. Occasional violent episodes would be normal, “but the scale of violence here is unexpected” (Whittle, 1996: 171).

The picture is quite complex, and other late LBK settlements and causewayed enclosures provide evidence of combined defensive capabilities and possible ritual functions. Some have evidence of burnt houses, for example at Darion, Belgium (Bradley, 1998a: 74). But although defended, it also had structured depositions of human bone and elaborate artefacts in pits, like other sites with discontinuous boundaries (Bradley, 1998a: 76). The ditches at Darion, for example, were shallow and do not seem defensive. Confrontation and “friction on a frontier might be expected at the beginning, not the end of contact” (Whittle, 1996: 176). I would disagree: considering the ‘packing’ that may have occurred ahead of the LBK advance, it is precisely towards the end of the process when tension has built up and avoidance is no longer a realistic option, when assimilation or confrontation decisions are made. I suggest that we may have misjudged the transition process because we have not fully understood the cultural beliefs and social dynamics of hunter-gatherer groups.

The impact of Neolithic material culture may have caused some splitting and factioning of hunter-gatherer societies. The normal social fluidity of hunter-gatherer groups would have furthered this process. Again this is a process that could take a few years, a few generations, or several hundred years. In western Scotland, for example, the evidence of continuity “suggests that the Mesolithic populations of the region were not hostile to innovations associated with farming economies” (Armit and Finlayson, 1992: 671). However, the very flexibility, adaptability, knowledge and resourcefulness of Mesolithic groups, arguably their greatest strengths in the face of Neolithic culture, could have been their greatest weakness. It was the way in which “enculturating foragers may have experimented with what was to hand, without committing themselves to irrevocable change” (Whittle, 1996: 209), that may have slowly allowed tacit acceptance of Neolithic material culture. But acceptance does not equal conversion. Following the argument of Rob Young’s (1989) insightful paper, hunter-gatherers would have “selected the techniques and/or resources that they thought would be useful and adapted them to their own ends” (Dennell, 1985: 136), and this means for hunter-gatherers that the “new has always
been used in ways that were reconcilable with the old” (Brody, 1983: 208). In Britain this may have included adopting new forms of projectile points, such as leaf shaped arrowheads (Young, 1989: 174).

9.7 Conflict and defence in south-west England

In south-west England many of the hilltop sites also show evidence of substantial defences in later phases. At Carn Brea 750 leaf-shaped arrowheads were found during the excavations, and hundreds more were found from surface collection (Fig. 9.2). The number, location, and condition provide overwhelming evidence of “a terminal attack upon the site during which internal structures may have been burnt and indeed parts of the enclosure wall deliberately slighted” (Mercer, 1986: 53). It is now clear that this kind of evidence can be found elsewhere. On Hambledon Hill, Dorset, evidence of burning of the Stepleton enclosure is seen as “a preliminary skirmish in an altogether more serious encounter”, perhaps around the probable larger causewayed enclosure on the northern spur, now occupied by the Iron Age hillfort, a more defensive position (Mercer, 1988: 105). At Crickley Hill, Gloucestershire, the enclosure (phase 1d) had been defended from archery attack, and the design of the site suggested that it was “highly likely that it was built with this intention” as over 400 arrowheads “choked the eastern entrance passageways”, and fanned out along tracks into the interior (Dixon, 1988: 82). At Hembury, 140 arrowheads, many burnt, found in contexts suggestive of “extensive and intensive burning in the neolithic ditches” attest to the same kind of action (Mercer, 1986: 53) (Fig. 9.2).

These violent actions have been traditionally explained as the result of increasing tensions in Neolithic society, building up because of population increases and land shortages (Mercer, 1988: 105). The construction of defences on these sites indicates some foreknowledge of trouble. But it does not occur when they are first constructed, but later, in what is known as the ‘mid-Neolithic standstill’. This was originally attributed to land exhaustion leading to some forest regeneration and a slackening of Neolithic expansion. However, the fact that many of the enclosures were built during this period, and axe production increased also, suggests that the ‘standstill’ should not be seen as an economic phenomenon (Bradley, 1984: 34). The favoured
explanation is that of conflicts amongst competing Neolithic groups, and perhaps enhancement of individual status through leadership of war bands (Thorpe, 1999: 181). The increased production and exchange of stone axes at this time “surely reflects the formation of social relationships over increasing distances”, beyond the local lineage system (Bradley, 1984: 36). Although we might see a growth of a new consciousness and identity (Todd, 1987: 75), might not this system of long distance connections have been an attempt to strengthen bonds between Neolithic communities, rather than fuelling warfare between them? I suggest that there is another reason for these events: that is, the final, hostile reaction of remnant forager groups uniting in the face of a common threat, but adopting and using Neolithic technology.

In south-west England, like north-west Europe, the conflict does not come at the beginning of the process, in a landscape where there was still room to avoid assimilation. Conflict occurs later, in the middle the transition, probably at a critical point of no return for surviving forager groups. It is what we should expect from the social dynamics of hunter-gatherer societies. Hunter-gatherers and herders could have been using and moving over the same land for some time (Mercer, 1986: 40), but the hunter-gatherers may have experienced more disruption (Moore, 1985: 104), so an uneasy distance may have been maintained between them. This might suggest that hunter-gatherers would gradually be pushed, or remove themselves, from contact zones. The uplands may eventually become the refuges for remnant forager groups, increasingly circumscribed and infringed upon.

There is no obvious evidence of violence or conflict on Exmoor, and no enclosures of Neolithic date. At Quaking House 2km west of Milverton, a large Neolithic site has produced 98 leaf-arrowheads, a polished axe and further fragments, plus a range of other tools (Grinsell, 1970: 23-4; Moysey, 1918). It is a flat-topped hill “in a commanding position overlooking the Vale of Taunton”, and excavation “might reveal another sizeable, and perhaps enclosed, hill-top settlement” (Todd, 1987: 80). The site can also be said to be on the edge of Greater Exmoor. It should be noted that, although of generally lower altitude than Dartmoor and Bodmin Moor, Greater Exmoor is the most extensive area of upland in the south-west. Bounded on the north by the Bristol Channel also means it is not wholly surrounded by lower, perhaps
more easily, settled land. It should not, however, be seen as marginal land in prehistory, but with a wide range of environments, and room for possible avoidance of major early Neolithic influences. The extent and timing of woodland clearance would also seem to have been less intensive, variable, and quite late. The survival of an aurochs well into the second millennium BC (McDonnell, 1998) attests to the continuation of suitable woodland and wetland habitats, perhaps still supporting breeding populations. This would seem to be in contrast to Dartmoor, where clearance was already well under way at the beginning of the second millennium. To further assess the possible consequences of this scenario, we need to look at the role monuments may have played in the transition on Exmoor.

9.9 Monuments
To implement an agricultural way of life on any scale required a quite different understanding of the world, of conscious thought and unconscious habitual action. A different conception of time and space is a necessity (Bradley, 1993: 18). Monuments can be seen as the evidence of attempted solutions to problems which lie in the patterns of everyday life, the “unconscious pattern of references” which are the interactions between people (and their environment) (Gosden, 1994: 89). Monuments helped to re-structure people’s understanding of space, their relationship to the sacred, and translate this process into the basis of everyday activities over very long periods of time. Gosden makes the distinction between ‘public’ time and habit. It is the creation of a new sense of public time, that is, the monuments, which dominates the archaeological record, and is “evidence of both problem and solution” (Gosden, 1994: 162). The real process is the interaction of this new force (the Neolithic) with old habits, that is, the private time of a hunter-gatherer way of life that changes very slowly (Gosden, 1994: 162).

The early Neolithic was characterised by predominantly small-scale, “face to face” societies, which although dispersed, were held together by a sense of community, attachment to places, shared values, of a new sense of time, descent and the sacred (Whittle, 1996: 7). The monuments are the relicts of these acts of “people coming together in shared activities and projects” (Whittle, 1996: 7), the setting up of links between people, termed mutuality (Gosden, 1994: 90). The dispersed nature of early
Neolithic society, still based on a mobile way of life, may have necessitated building links between people over long distances, who came together at specific times and places in legitimation of communal beliefs and values. The collective beliefs of early Neolithic society (note the subsuming of the individual in long barrow burials) was, I would argue, a way of demonstrating a unified identity, in full view of a world, for the first time of which they may have been fearful. Not all of the neighbouring hunter-gatherers may have been friendly. The early monuments may be “emblematic of the unity of the group” in that they represent a communal effort (Sherratt, 1995: 246), but I would suggest they are also examples of ‘unity is strength’: the demonstration of a unified face to the external world. As messages to be read, early monuments were “veritable beacons in stone” (Sherratt, 1995: 248).

In this way they are another set of messages, of communication, just like the material culture of polished stone axes, but far more spectacular. The monumentality of many early structures imposed itself on the surround, confidently, boldly, an architectural rhetoric partly intended for a wider audience (Sherratt, 1995: 252). One implication of this idea is that hunter-gatherer populations survived “alongside the first farming groups in outer Europe for very much longer than is often supposed” (Sherratt, 1995: 255). The Neolithic may have been “more a spiritual conversion than a matter of changing diets” (Whittle, 1996: 8). Conversion implies religious, not just social or economic change (Sherratt, 1995: 253). Building monuments was literally ‘altering the earth’ (Bradley, 1993), and this can be seen as an extremely powerful statement to ‘unconverted’ hunter-gatherers. Monuments therefore reflect a challenging new relationship to the sacred: conscious demonstrations of the power of human artifice in its manipulation of earth and stone.

Does the absence of early Neolithic monuments on Exmoor reflect the concerns of forager groups uneasy with such dramatic statements? The closest monument of early Neolithic date is the probable dolmen at Williton, on the coastal plain to the east. The spatial pattern and rough chronology of the monument record may therefore indicate the co-existence of different groups in the greater Exmoor area in the early Neolithic. It is possible that some hunter-gatherer groups avoided extensive early contacts, perhaps based in the central areas of higher Exmoor, becoming fully assimilated only at a later stage. The small Exmoor monuments may represent the
legacy of this local identity, and help to explain the uniqueness of Exmoor's stone settings, as the belated response of an independent, largely indigenous, tradition.

The larger settings of Almsworthy Common and The Chains Valley were probably already important places before the monuments were constructed. They were ideal places to (symbolically) control or monitor movement, and perhaps advertise that position by marking the place in some way. The monuments formalized this significance. They may also be placed to incorporate aspects of sacred geography in their landscape characteristics. Locations that were already important to look out from, as a means of assessing and controlling movement, were obvious places to locate monuments that could be made visible. The stone circles and larger stone rows occupy important positions around the edge of the central moorland areas, and might reflect respective spheres of influence and advertisement. However, there does seem to be disharmony between the concerns of these larger settings and the overall distribution pattern of the probable later Neolithic monuments.

The large sites demonstrate different aspects of the concerns towards movement and visibility, although their respective chronology is unclear. The interesting thing is that Almsworthy and Chains Valley (and perhaps Mattock's Down) incorporate both outlooks and concerns, whereas Porlock and Withypool stone circles seem only to seek to make the sites visible. The stone circles seem to establish the sites as new places, rather than monumentalising a location already important for other reasons. I think this distinction can be made. It is perhaps useful to think of this distinction between a place as a natural location, and the construction of a monument in a site. A monument can therefore formalise an existing place, or create a new place altogether. Either way the place and its meaning are reordered and changed. The stone circles were probably also meeting places for the surrounding areas, and although the larger settings probably also had similar communal functions, they are primarily places along existing routes or paths. The stone circles therefore seem to attempt the creation of a new focus.

The remaining settings, though quite possibly originally more extensive, survive in the central area. They exhibit greater evidence of hunter-gatherer type concerns than the other sites, although most should also be seen as part of the process of 'becoming
Neolithic'. Many stone setting sites showed a concern with movement, for example located in passes, which again may indicate continuity with hunter-gatherer ways of life. Many sites that I associated with movement also tended to occur on or above 400m OD, and the environmental evidence indicates that these were likely to be the first areas to be cleared, or see gradual reductions in woodland, similar to, though later than was Dartmoor. At lower levels, however, woodland may have persisted until significantly later, and the usual questions surrounding the intervisibility of sites, especially small settings, must be posed. They may well have been constructed in clearings, either existing ones, or as speculated for Dartmoor, areas may have been deliberately cleared for the construction of monuments (Quinnell, 1994: 54).

Other sites were located on divides between upland and lowland, or more specifically between the ends of upland valleys systems and higher ground beyond. Several of these locations were also marked by later structures pertaining to stock gathering, suggesting some long traditions of similarity in the function of the locations. These can only be speculative, but would not be out of place for mobile herders or pastoral economies. The lack of large scale co-axial field systems may also be a real negative, but again would not be inconsistent with the interpretation outlined above. The later prehistoric settlement pattern on Exmoor of hillforts and hillslope enclosures, without attached field systems, probably "implies an emphasis on pastoralism, and it is possible that some of the smaller enclosures were the result of a transhumant system" (Silvester, 1979: 186). It maybe that this later system largely reflects an earlier pattern, although again we must not assume that cereal agriculture did not occur on Exmoor, by imposing present day assumptions of ecological and economic marginality (Young and Simmonds, 1999: 199-201).

The evidence from Exmoor therefore demonstrates several trends. Exmoor may have been outside the main spheres of early Neolithic settlement and activity in the southwest. This might suggest possible survival of some hunter-gatherer groups on Exmoor that provided space to avoid obvious contacts. Adoption of Neolithic traits may therefore have taken some time, was highly variable, and took place within a localised, indigenous, tradition of attachment to place and country. This does not necessarily imply a remote or insular community, as there is not necessarily a direct relationship between socio-political marginality and location (Young and Simmonds,
Prehistoric Exmoor may however have been populated by a people prepared to maintain their traditions, and assert and retain some independent traits. A later indication of this difference may be the relative lack of ceramics in excavated barrows in Devon, compared to counties to the east and west (Quinnell, 1988: 5). The distinction is continued in the proportion of excavated barrow finds with metalwork: north Devon (Exmoor) and Dartmoor contain half the average for the south-west generally, and significantly less than in south and east Devon, differences that "hint at regional variations in ritual activity" (Quinnell, 1988: 7). I shall discuss the possible significance of pottery and metal artefacts below.

Dartmoor also has few early Neolithic monuments, and those are scattered around the outer edges of the moor, just above current cultivation limits, for example at Gidleigh Common in the north-east, and Corringdon Ball in the south (Fleming, 1988: 95). Most of the later monuments such as the stone rows pre-date the vast majority of reaves, which tend to respect them (Fleming, 1988: 105). Many of the smaller monuments surveyed by Turner (1990) display a range of typological characteristics, generally circular, arranged around and abutting natural landscape features. These may also denote a localised adaptation, but one perhaps more open to the symbolic strength of the circle widely used elsewhere in the Neolithic and early Bronze Age. In contrast, Exmoor's overall lack of this style and symbol for lithic monuments might again suggest a more independent tradition.

9.9 Cosmology, monuments and the sacred

The above scenario represents one interpretation. I have tried to take account of the importance of the relationship between land and people, material culture and exchange, frontier relations and conflict. But underpinning my interpretations of all of these is the nature of religious experiences. From these (extrovertive type) experiences the land itself is deemed to have sacred power, as every plant, blade of grass, rock and stone, although seen intensely and separately, is experienced as part of an underlying unity. In this sense the whole landscape can be understood as imbued with a hidden power, but the places where these experiences occur may also therefore be important. Certainly for hunter-gatherer populations the sacred is located, residual. A place is not made holy or sacred by building a monument, but
recognised by its intrinsic characteristics. So although hunter-gatherer groups move into new areas, this may be why the same “locations continued to be recognised as sacred locales” even though “transference of such traditions took place between groups that differed in language, religion, economic focus and area of origin” (Sundstrom, 1996: 187).

For many non-Western peoples, holy places just are. The significance of religious experiences for past human populations cannot be ignored, and is “perfectly plausible as a motivating force for some of the symbolic monuments which we may observe from the past” (Renfrew, 1994: 48). Were monuments built in places where these experiences occurred and held sacred in the Mesolithic, or deliberately constructed elsewhere, to create new relationships and alignments to the sacred? Work on Bodmin Moor has suggested a respectful distance was kept between early Neolithic monuments and earlier natural sacred places (Tilley, 1995: 17). How then did these new places claim sacred authority, or access to the sacred? Was there something deliberately significant about the actual site chosen? Have we, by concentrating on the architecture, the monument in the wider landscape, underestimated the significance of the exact location of the monument? I have suggested that the specific location of monuments may have been determined by the occurrence of underground water at these sites.

Now if reactions to something like water or bedrock alone were important, there would literally be thousands of stone setting sites on Exmoor. Rather, I suggest that some areas were already important, but in seeking to emphasise the location, people sought specific places that incorporated and symbolised a whole set of beliefs and experiences about the natural world, and their knowledge of it. In building a monument, people were consciously constructing, or bringing into being, a physical representation of their cosmology. But what constituted such a cosmology and why go to such lengths to make it manifest?

Cosmological schemes identified in fieldwork exhibit a concern with areas of high ground approximately at right angles to low ground or streams (Fig. 9.3), or attempts to act as a focus in the landscape by creating a new focus (Fig. 9.4). But this is purely what we can recognise from our horizontal appreciation of land, the landscape. Such
a concept is integral to a linear sense of time as discussed in Chapter Two. But prior to the medieval period, most people had a basically cyclical sense of time, and a vertical cosmology, where nature had both height and depth, and as a consequence, numinosity (Tuan, 1974: 133 and 148). There is often a mediating point between binary oppositions in cosmology, for example the earth lies between the upper and underworlds, the same way that the idea of the centre comes between the cardinal directions (Tuan, 1974: 16). From this perspective, we should also be attempting to understand the vertical aspects of the sacred cosmology of the stone settings. As we now acknowledge the reality of the astronomical alignments at many prehistoric sites, their ‘height’, should we not also recognise the possibility of the reality of the cosmology in terms of its depth? I would argue that this provides the meaningful context for the findings of the dowsing survey, and that these sites incorporate the symbolism of vertical as well as horizontal cosmological schemes; it is the weight of our own traditional assumptions that has prevented us from recognising this possibility.

These concepts and the symbolic use of water in the design of sites only work if water itself has some symbolic properties for the builders. The particular understanding of natural elements comes from people’s involvement with the material world, which gives rocks or streams, say, their ontological status within the overall cosmology (Richards, 1996b: 314). It is because this meaning in prehistory transcends the mere physical appearance of the feature that makes it difficult for us to recognise its overall significance (Richards, 1996b: 315). I might add that it is religious experiences that reveal this otherness of everyday aspects of the environment. In psychoanalysis the symbolism of water relates to the unconscious, “formless but fertilizing, a source of potential power” (Tuan, 1974: 23). It is precisely the combination of the seen and hidden meaning for prehistoric communities which needs to be recognised, in the same way that the moon and the sun were important for more than just light and warmth, but also for their symbolic significance.

Chronologically, chthonian (earth/water) gods and deities antedate those of the sky in cosmological schemes (Tuan, 1976: 15). In ancient Greece the chthonic forces were challenged by the later temples of sky gods Apollo and Zeus, which sought to
dominate the land, "rather than adapt to the places in which they were set" (Tuan, 1974: 147; see Scully, 1962). Sky gods were characterised as male, of rational spirit and thought, which Cosgrove terms *animus* (Cosgrove, 1993: 287). In contrast Dionysius is a god of vegetation and organic growth, and is associated with the intuitive and passionate aspects of the human psyche: to "the non-rational and mystical union of humans with chthonic earthly forces", the feminine *anima* (Cosgrove, 1993: 288). In classical concepts humans shared their personalities with the gods and the earth, so the earth and places also had *animus: animus mundi*, which is heard and perceived (Cosgrove, 1993: 287).

With these basic cosmological schemes in mind, the findings of the dowsing survey and the rest of the fieldwork might now be argued to be evidence of why sites are located in specific places, not just in the area, but in many cases, the exact spot. Each sacred place becomes its own centre of the world, where the sacred place is a "break in the homogeneity of space" (Eliade, 1959: 37). These places were where the cosmological schemata coincided, both horizontally and vertically, constituting a place enabling communication between the levels of heaven, earth and underworld (Eliade, 1959: 37). The in-between level, Gaia, the earth (see Cosgrove, 1993), is inhabited by humans, and provides the horizontal cosmological constructions evidenced in relationships to landscape features and patterns of movement (Fig. 9.5).

The manifestation of the sacred creates a fixed point or axis, the centre around which the world revolves, making orientation possible (Eliade, 1959: 63). But the places where these events occur can be purely natural features, rocks, or springs "identified with some form of divine manifestation" (Tuan, 1974: 146). Are monuments, then, constructed in the exact place where the holy occurs? The formal elements of sanctuaries for the ancient Greeks were, first of all, the "specifically sacred region in which it was set, and second, the buildings located within" (Tuan, 1974: 147). Do the monuments on Exmoor represent the marking and respect for an existing sacred place, or are they the creation of new sacred places, deliberately constructed within cosmological schemes to aid that sacredness of place? This may be too much of a dichotomy, and again a nature:culture construct. The construction of a monument to formalise and define space is "an attempt to create order out of disorder", in the sense that it replicates the original act of creation, and therefore the sacred nature of
creation (Tuan, 1974: 146). However, the places do to some extent choose themselves within the system of beliefs of the people of that country. The place is meaningful because of its landscape characteristics, and the exact spot is chosen to demonstrate that significance.

Can we see in this creation of monuments in new places, a breaking down of the older patterns of association to natural sacred places? For example, henges become the central point, a new *axis mundi*, or centre of the world, which creates a new orientation. As Richards says, these ‘ritual landscapes’ are “nothing more than a formalization of the social landscape of daily life” (Richards, 1996a: 206). I would agree, but the fact that such re-orientation is necessary should alert us to the extent of the change, and to the power of earlier systems of belief. The earlier hunter-gatherer beliefs understood the country or landscape to be somehow condensed within the places rather than places as part of the landscape. Can we therefore see in this creation of new places the microcosm as symbolic of the macrocosm, a powerful reworking of this older tradition, but where the concept of the land is now condensed or embodied in a new place, the henge, stone circle or setting? If so, it reworks the traditional hunter-gatherer way of thinking about places to challenge meanings, power and attachments to old (Mesolithic) places. Instead of the marriage of hunter-gatherer beliefs to the sacred places they felt in their surroundings, these new places are in effect divorcing, separating themselves, and in some senses manufacturing (access to) the sacred, anew. It represents the undermining of a way of life and way of being in the world. The building of monuments, and their situation within cosmological schemes, and chosen locations, enable increasing political control of access to the sacred, and perhaps the specialisation of that practice.

When originally contemplating the possibility of underground water at monument sites, I thought that it may be the hunter-gatherer type sacred places that would have this feature, and that Neolithic monuments would be constructed in places that were more suitable for the propagation of ideological and religious messages. Upon reflection, this was an implicit nature:culture construct, and it was not borne out by the dowsing evidence. Rather, the survey tended to show the opposite. I now suggest this is in fact more logical, but it also indicates something about the nature of the Neolithic mindset, and the new relationship to the sacred. That is, despite the
spectacular nature of many monuments, which indicates confidence and strength of belief on the part of the builders, the need to tie these into cosmological constructs may indicate another underlying element, that of anxiety, even fear. This may be the long term legacy of the transition. In order to explore the nature of this reasoning, I want to outline a very broad model of the Neolithic world view.

9.10 The Neolithic world view

If the Mesolithic way of life was so flexible, adaptable and resilient, why did it change? Hunter-gatherers have an “irrational confidence” that nature would provide (Martin, 1993: 49): it is this combination of trust and confidence that enables them to participate in a ‘cosmic economy of sharing’ (Bird-David, 1992: 30). Was there, quite simply, a loss of confidence? Maybe a growing fear that nature could no longer provide “provoked a rupture of the imagination” (Martin, 1993: 52). What made the Neolithic, in simple terms, such an attractive, and perhaps powerful, alternative? Did Neolithic material culture undermine the confidence of the relationship between people and the land upon which they depended? To some extent this is too simplistic. The Neolithic does not represent the triumph of human culture over untamed Mesolithic nature. Instead, it represents the beginning of a consciousness that is striving to differentiate itself from some aspects of the natural world, rather than a hunter-gatherer way of life that deliberately seeks to blend and subsume its culture, in nature.

I suggest, however, that there is a real legacy of Mesolithic beliefs that were re-worked by the Neolithic: primarily the idea of appropriate behaviour. There may have been a deep sense of guilt amongst converted forager groups at having broken the older beliefs and practices with plant and animal beings. The Neolithic is the genesis of the illusion of self-nonself, as food production only becomes possible after we “first imagine these other beings out of the realm of shared personhood with humankind” (Martin, 1993: 83). Whittle also speculates that the Neolithic may have “been reinforced by guilt to do with the breaking of earlier bonds with nature” (Whittle, 1996: 360). A consequence of this guilt is anxiety, and fear, as there was still a strong belief in the innate power of nature, of a power and force that needed respecting and placating.
Separation from nature, of people no longer speaking the language of plant and animal beings, required new forms of communication with the natural world. New subsistence practices were still ultimately dependent upon the vagaries of the environment. I suggest it is this element that creates the sense of anxiety behind the grand design of monuments. The loss of trust, and confidence, promoted a new form of appropriate behaviour defined by reciprocity. Placating the sacred power of nature through sacrifices and offerings was the new way in which people communicated with their surroundings, and maintained a successful relationship between people and the world.

These practices of appropriate behaviour involve a reciprocal relationship to the land which Yi-Fu Tuan has termed ‘geopiety’ (Tuan, 1976), where the land has an ‘intrinsic power’ that needs to be respected. The term is a modern geographer’s construct, but ideas of “reciprocation in nature, lie in profound human experiences that were given other (largely religious) expressions in the past” (Tuan, 1976: 13) (my emphasis). Similar sentiments and practices are widely found throughout antiquity. Both ‘pity’ and ‘piety’ are associated terms, the Roman pietas and the Chinese hsiao, and at the core of piety is reciprocity (Tuan, 1976: 12). In this sense piety covers relations between people, between humans and gods, and humans and nature, and the “three relations are closely interwoven” (Tuan, 1976: 12).

There are several ways in which this notion of reciprocity, and the new relationship to the sacred, can be demonstrated in the Neolithic. Pottery is primarily very important because of what it is: the earth transformed. If the very earth, or land itself, is sacred, its transformation is symbolically extremely significant. The way that the reciprocal relationship is demonstrated is by the use and breaking of pottery in an act of ritual deposition. Pottery is made by humans, from the earth, its creation is itself an act of destruction (of the earth). But the breaking of pottery is a ritual act, perhaps during feasting, that symbolically destroys the humanly-created power of the pottery, and aids its assimilation and return to the soil, so the “violation of the earth is justified by offering earth back to earth” (Kennedy, 1996: 272). Not only does this reciprocal action show respect and placation of sacred nature, at the same time it
reinforces the new human power over the environment, as it is humans who create and destroy the pottery (earth).

Another indication of geopiety in the Neolithic may be the relatively late adoption of plough agriculture. Although plot cultivation as part of mobile herding was probably practised for a considerable period, it is not significantly different from using digging sticks. The development of ard based agriculture may have required a good deal more legitimation and working through of fears of offending the Other. Ploughing may be seen as a tearing of the earth, a violation of the surface (Kennedy, 1996: 254). This may account for the deposition of ards in watery locations (Bradley, 1998b: 161; Glob, 1945; Thomas, 1995: 346). Similar practices and beliefs are found today. Any “sacrilegious” or “sacred acts of cutting”, for example cutting the first furrow of the season amongst the Kabyle of north Africa, is understood as injuring the earth (Bourdieu, 1977: 127). These practices only have validity if there are beliefs in the sacredness of the earth itself, and that it can be offended, by inappropriate behaviour.

In prehistory the first metal artefacts could have been seen as potentially even more powerful than polished stone tools or pottery. Metal is a transformation of the earth; changing copper ore and tin into something completely unrecognisable from what it was before. The transformation of earth or rock to metal could have given early metal a magical and hence religious as well as political power to the holder (Budd and Taylor, 1995: 139). The practice of ritual deposition of metalwork in the earth or watery contexts can also be seen in the same light. These have usually been interpreted as an act of ostentatious consumption of wealth (Gosden, 1994: 154). But I would suggest it may also represent the conscious return of nature transformed by human artifice to the earth or water: returning the metal from whence it came, in the process healing the damage to the natural world caused by its extraction. The bending or breaking of metal artefacts, as with pottery, may have showed respect and humility, and aided the assimilation and return to nature. This argument is not contradictory to other explanations of votive deposits, for example, and the practice of deposition has a very long history (Bradley, 1998b). I might suggest that it continued as long as the fundamental relationship to the land remained significantly unaltered.
The fears of technology in the ancient world, and ideas of human hubris and nemesis, are, I suggest, another example of these beliefs that nature could be offended. It may also account for the somewhat ambiguous role of smiths and metalworkers in non-industrial societies around the world today. They are very often disliked, feared, and distrusted, and although their metalwork is universally respected, it is not just for its utility (Rowlands, 1972: 217). The transformation of earth or ore into metal is only significant if there are beliefs concerning the sanctity of the earth itself. Amongst the Maraket people of Kenya, it is the smith’s creative power that is considered important, and to be cursed by him is greatly feared (Welbourn, 1981: 37),

I have only briefly mentioned several aspects of the development of appropriate behaviour across the transition, and although this represents a fairly abstract modelling of prehistoric world views, it does attempt to relate the basic everyday subsistence practices with religious beliefs, healing the dichotomy between economic and symbolic approaches. There are perhaps several powerful motivating elements behind the Neolithic. The liberation of people from the cultural inhibitions of the Mesolithic mindset may have broadened horizons, and advanced new possibilities. In the Mesolithic period, identity, selfness, and indeed the very definition of humaness, had been inseparably bound into the places, land, relationship to social group, and the community of plant and animal beings. This all encompassing vision was underpinned by the unifying knowledge of religious belief and experience. The Neolithic cut the ties that bound these elements together. Neolithic material culture was the thin end of the wedge driven between people and place, in the process initially diminishing, but ultimately expanding, and changing the sense of self. Domestication destroyed the shared personhood with plant and animal beings, and remoulded anew the sense of self and the human. Monuments created new places, speaking of a seductive and empowering new relationship to the sacred, freed of the narrow cultural inhibitions of the hunter-gatherer world view. The construction of large monuments, that in the mind of the hunter-gatherer offended codes of appropriate behaviour in spectacular fashion, did not bring about expected punishment from sacred powers for such transgressions. The limitations of the supposed strength and power of hunter-gatherer religious beliefs were exposed by these events. The world became full of new possibilities held in tension by
reciprocity. The Neolithic in its final form was not just a new economic practice and
technology, of social relationships, and use of the natural world: the transition
required profound collective and personal transformations. It was literally a new
mode of existence, a new way of being human in the world.

9.11 Conclusion
Traditional Western approaches have usually separated the economic from the
religious: the relationship between person and place is seen as primarily economic, as
the place provides the material means of subsistence. But for hunter-gatherers there
is no distinction between economy and religion: one is predicated on the other. There
is no way of separating the activities of subsistence from the relations between
people and place. Hunting and gathering are not therefore purely economic activities,
as in the process people are maintaining their identity as social beings. It is "precisely
these relations between persons and with respect to place which, projected
ideologically as religious relations between place and persons, furnish tenure with a
spiritual dimension" (Ingold, 1986: 140). I have argued throughout that the religious
beliefs are derived from the knowledge of the sacred as an objective reality, and that
these beliefs provide the boundaries for the level of intervention of hunter-gatherers
in their environment.

These beliefs have always been considered as nothing more than illusions, and are
'all in the mind'. If we are to give these ideas proper consideration, then it is
worthwhile exploring the possible basis of the reality of religious experiences. I
suggest that these are not just about belief, but about what we are as human beings
and how we exist in relation to the world. The last chapter will provide some
interpretations of our relationship to the environment in this respect.
Fig. 9.1 Neolithic sites in the south-west.
Fig. 9.2 Arrowheads from Carn Brea and Hembury (Adapted from Keene, 1999).
Fig. 9.3 Contour sketch maps of three monument locations showing possible cosmological schemes in their topographical characteristics.
Fig. 9.4 Contour sketch maps of two stone circle locations and possible cosmological schemes evident in their topographical characteristics (compare with Fig. 9.3).
Fig. 9.5 Hypothetical model of prehistoric cosmology with the sacred space at the *axis mundi*, or 'centre of the world'.
CHAPTER TEN

CONCLUSION

10.1 Summary of the argument
The original question this study sought to answer was whether there was a particular reason for the specific location choices of prehistoric ceremonial monuments. Linked to this problem was the question of continuity of veneration and use of sites in earlier and later periods. It very soon became apparent that any consideration of this problem involved a range of other questions, not least that of the wider context in which the monuments were constructed. Hence the research changed direction and focus to examine the nature of the transition to agriculture, in particular, attempting to concentrate on the cultural beliefs and practices of Mesolithic hunter-gatherers, in order to provide the background to the way these societies understood their surroundings, and why some places were considered sacred. Only then could an appreciation of the question of continuity of sacred places be properly assessed.

In the process, it became clear that there was a distinct division between the way that Mesolithic and Neolithic societies were studied. Not only had the role of hunter-gatherers been undervalued in the transition to agriculture, as recipients of a higher and more successful form of culture, the way they lived was seen as an inability to rise above nature, or to realise their full humanity. Many of these assumptions were overturned by the model of the ‘affluent forager’, but hunter-gatherers were still studied in terms of modes of subsistence, their use of technology, and ability to adapt to the environment. The economy and environment were the prime determinants of hunter-gatherer lives. But the models of adaptation were based on the Western concept of nature: something outside, beyond, and external to the human being and culture.

By comparison, the Neolithic in north-west Europe was originally interpreted as the establishment of sedentary farming communities and the building of monuments. It was a form of culture differentiated from the hunter-gatherers primarily in
evolutionary and economic terms, with a particular form of economic practice, agriculture. Only in the last twenty years have new approaches challenged this assumption: for example, the role of ideology in society, and the symbolic nature of material culture, have been recognised as equally important. In contrast to foragers, the domestication of plants and animals was seen as the evidence of human ability to transcend nature, and become cultural beings.

In Chapter Two I highlighted a dichotomy of approaches, not only in the methods used to study the past, but also in the way the past had been divided up. Mesolithic hunter-gatherers were studied as part of nature, and Neolithic farmers were studied as social beings, with cultural rules and religious beliefs. Studies of the Neolithic have also been characterised by a division, and it is interpreted as either economy or ideology. There has not necessarily been a way of reconciling the two approaches. It is clear that the whole concept of the Mesolithic-Neolithic transition is predicated on the much larger philosophical framework of the nature:culture division that is foundational to much of Western thought. In Chapter Three I therefore sought briefly to examine the historical roots of these assumptions and philosophical frameworks to demonstrate how pervasive these intellectual approaches were in different areas of study. Clearly the Scientific Revolution and the inspiration of the Enlightenment have transformed not only our view of the world about us, but our place in the cosmos, and therefore our view of ourselves. This revolution in understanding has been achieved by ‘standing back’: creating an objective viewpoint, by which to study the world. Consequently this has resulted in a distanced view of our surroundings. I have tried to show that to understand some aspects of past societies, a quite different approach is required.

In using the work of Heidegger and Ingold I have raised the question of Being, and how as Beings we perceive and know our environment. Heidegger is perhaps more important for the questions he asks rather than the answers he gives, which still leave a rather under-theorised notion of the environment. But the idea that we cannot know what we know until we understand what we are as human beings, and how we exist in the world, is still relevant. Ingold contends that we know the environment by living and moving through it, that knowing is part of being, and is not a conscious act of cultural interpretation added-on after an object is perceived. I do not claim that
either of these approaches has all the answers, but they are useful aids to thinking about our relationship to our surroundings in different ways. They may also help us to approach the ethnographic evidence from a different perspective.

The ethnographic evidence in Chapter Four has shown two common factors. Firstly the importance of the overall relationship of people to the land they inhabit cannot be underestimated. Basically this seems to involve a relationship that sees the physical landscape and the imaginative or sacred landscape as one, different and yet identical at the same time. In practice the result is cultural codes of ‘appropriate behaviour’ towards the land, even towards inanimate objects such as rocks and stones. The second factor seems to be a corollary of the first, but not entirely dependent upon it. This is the belief (or knowledge) in the sacredness of places, localities and things within the landscape, as reflection on the sacredness of the land, which enables recognition of the sacredness of particular places (Deloria, 1993). The ethnographic evidence shows consistently that similar natural features such as caves, rock outcrops and formations, boulders, springs, pools and streams all have sacred significance in widely spaced cultures, and that “they must be treated with proper respect” (Carmichael, et al., 1994: 6).

I have deliberately taken the stance that these ‘beliefs’ should primarily be accepted on their terms: we cannot automatically assume them to be incorrect or reflect ‘primitive’ or ‘irrational’ beliefs about the world, which should only be understood from a Western perspective. The question arising from the ethnographic evidence was: why should so many different peoples in different parts of the world hold seemingly very similar beliefs about the relationship between themselves and elements of the natural environment? This led me to examine the way in which religion and religious beliefs are studied in anthropology and archaeology. Two main differences in approach were assessed in Chapter Five.

The first approach assumes that religion can be understood in its entirety purely by rational analysis: this includes both ‘explanatory’ reductionist approaches (variously based on the legacy of the thought of Marx, Durkheim, Freud and others), and ‘interpretative’ approaches best characterised by the influential work of Geertz. These approaches dominate archaeological interpretations of the religious beliefs and
practices of past societies. They all assume that the sacred, holy or divine aspects of religion are the results of religious belief and practice, which are themselves the product of economic, social and psychological pressures within the culture as a whole. The second approach does not tend to study religion directly, but concentrates on religious and mystical experience as the origin of the holy or sacred. The work of Barth, Otto and Eliade, for example, see religion itself as the secondary phenomenon, where religious belief is the consequence of religious experiences. These latter interpretations are very much in a minority in archaeology and anthropology, to the extent that they are seen as a relic of nineteenth century thinking. The current assumption seems to be that we can explain religion away without any recourse to such irrational beliefs. But can we?

An understanding of the historical context in which our current and dominant way of thinking about religion arose, suggests that it is as much a legacy of the fervour of nineteenth century secularising rationalism as was Otto’s own philosophical basis a reaction to it. My concern is that in the rush to analyse and remove the encrusted superstitions of religious belief built up over the centuries, we may have ‘thrown the baby out with the bath water’. The analysis of religious and mystical experiences does demonstrate a universal core to these experiences, albeit various aspects of them, and that they are found in all times, places and cultures. We should not ignore these findings.

The problem for many people in accepting the idea of the universal nature of the experience is that current ideas, which stress particularity and diversity of cultures, are seen as incompatible with any possibility of ‘universals’. I have argued throughout that this is itself the problem, and have also demonstrated that the doctrine of the universality of human experience is not in contradiction to the belief in the particularity and diversity of cultural contexts. The idea of a contradiction between these two positions is in fact predicated on the traditional nature:culture framework. It is a problem of our own making, and of our own cultural context.

In applying this framework to the fieldwork data (Chapters Six, Seven, Eight, and Nine), I have attempted to demonstrate that the transition to agriculture cannot be understood without some acknowledgement of the role of hunter-gatherer religious
and cultural beliefs. These suggest that the hunter-gatherer concept of appropriate behaviour is derived from direct or indirect knowledge of religious experiences, interpreted within the particular environmental, economic and social contexts. It is my contention that the appropriate behaviour of hunter-gatherers and the idea of trust and confidence derived from these experiences and contexts, gave way to reciprocal relationships to nature from the Neolithic onwards. Geopiety survived for as long as the sacred was believed immanent in the land. However, increasingly controlled and specialised access to the sacred over time, and the schematization process of religious teachings, meant communication with the sacred degenerated into practices and belief in the efficacy of atonements and offerings, perhaps eventually including human sacrifices. However, in later prehistory we need to recognise there is a difference between those deposits of a political nature made in liminal or boundary areas and those concerned with agricultural or human fertility (Bradley, 1998b: 183). All these developments in later prehistory served to undermine the context for individual recognition of the sacred in the natural world. Belief was not based on individual experience, but moulded by political and religious elites. The gradual erosion of the belief that the “sacred soil is the abode of the gods waned as man acquired increasing control over nature and as Christianity spread to dominate the Western world” (Tuan, 1976: 26). For Christianity, “one of its express purposes was to loosen man’s earthly bonds so that he might more easily enter the heavenly kingdom”, so the long term effects of the Christian doctrine “was to denude nature of its spirits and mystery” (Tuan, 1976: 26).

However, such was the legacy and strength of the original beliefs that early Christianity could not eradicate them, and especially in rural areas Christianity simply formed a “kind of crust upon the surface of popular culture” (Morris, 1989: 62). The necessities of agriculture and the vagaries of climate and pests ensured a strong element of insecurity in rural societies, managed by an essentially propitiatory religion unwilling to give up the old superstitions and veneration of natural places. This also helps to explain the continued persecution and passing of edicts by the Church against pagan practices of worshipping natural features into the medieval period (Morris, 1989, 59-60). Throughout history people have celebrated their awareness of “recognizing the autonomous otherness of nature”, through art, religion, science, carnivals, and May Days, that “permitted a direct experience of the
animal otherness underlying personal and social identity” (Huxley, 1994 [1954]: 92). Even in the present day these beliefs still persist, especially in rural areas: the technology and scale has changed, but the reliance on the vagaries of weather and disease mean that the fundamentals of food production remain basically similar. For example, an archaeologist saw a neighbour of his, a farmer in north Wales, drop a pin in a well. When questioned, the farmer said he did it for his animals: “I know about the old gods, my father told me. I am a Christian, but I did it just in case” (Hughes, 1997: 10). The underlying continuity revealed by this story might be hard to reconcile with the emphasis on change and difference found in much recent archaeological thinking.

We tend to see these actions as mere superstition, and certainly that is what they have become. My concern, however, is that we assume them to have always been the superstitious actions of uneducated people, and ignore the fact that these actions we see now or in recent history may be simply the degenerated remnants of earlier forms of cohesive systems of knowledge. Folklore is rarely seen as of direct relevance to archaeology, but two prehistoric sites (cairns) in Wales, at Ceulan-y-maes-mawr, Dyfed, and Tinkinswood, near Barry, both have intriguing stories attached to the places. These relate that if a person sleeps on or near the cairn, they would wake up as a poet, go mad, or become an idiot, and a similar story is associated with the ‘seat of the giant’ on Cader Idris (Alexander, 1982: 56; Crossley-Holland, 1989: 40). If we ignore the quaint language, what these stories are implicitly saying is that the locations can change the mental state of a person. The association with prehistoric sites is intriguing, and may be coincidental, but the idea that places affect people in strange ways are widely found in the ethnographic literature. Such stories are rarely taken seriously by archaeologists because they do not accord with our philosophical frameworks. I suggest that our approach needs rethinking, and that the reason that these stories do not make sense is not because the information they contain is necessarily wrong, but because we currently lack the appropriate frameworks to interpret them. My interpretation of the past and of the ethnographic evidence of the present may differ to some extent with current thinking in archaeology, and the generalised approach attempted here could be accused of lacking sufficient attention to the particularity of different contexts. Some assessment of the reliability of the approach and use of evidence can perhaps be discussed here.
10.2 Evaluation of the argument

Such a long term view or construction of history obviously has weaknesses and limitations. The overall approach has been to take an abstract body of thought, although partly based on ethnographic evidence, and apply it in a fieldwork survey, to see how such interpretations may shed new light on fairly thin data sets. The fieldwork assessed many sites rather than attempting a more detailed study of a smaller number of sites and area. I think the survey benefited from this approach as without a wider understanding of the range of different sites a more localised survey could result in a skewed sample. Now that we have an appreciation of the range of sites, a more detailed localised study, focussing on specific problems, especially dating evidence, would be a useful next step.

In terms of the theory of the importance of religious experience, any approach such as this runs the risk of being too generalised, and ignoring specific categories of evidence that do not fit the overall interpretation. This work is itself simply attempting to identify one facet of the past, applying it to one particular period, but also extrapolating from this by suggesting that it also has relevance for every subsequent period. There have always been differences of scale in archaeological approaches. Regional studies were and are a central component of many processual based studies (Graeme Barker, pers. comm. 2000) and many of the syntheses of the transition by these authors take a Europe-wide scale, and a longer time frame than many post-processual approaches. To attempt, as I have, to show that one aspect of human experience could have been important in varying degrees in time and space, right across the transition to agriculture, and since, is potentially problematic. For many post-processualists, such an approach may be seen as a return to universalizing, or totalizing theories, and something to be opposed (Thomas, 1993: 379). I would argue that my approach does not undermine the significance of contexts, but that we need to be able to see very long-term patterns in archaeological data, which specialisation in particular periods may tend to overlook. In this respect there may be some interesting reasons why many post-processual approaches do not attempt such syntheses.
The basis of recent changes in patterns of thought and research questions has been argued to be derived from the new forms of capitalism in the late twentieth century (Harvey, 1990). Postmodern thought and academic discourses on language and text may have their origins in the “dramatic social and political transition in the language of communication in advanced capitalist societies” (Harvey, 1990: 49). Post-processual approaches are the archaeological versions and products of these developments. They attempt to move “from an objective view of the world towards the idea that all truth is contingent and historically based” (Gosden, 1994: 59). Each and every change or consequence must be understood by relation to its own specific context and not explained by any overarching universal category (Harvey, 1990: 44). Postmodernism therefore favours the local and particular over the global and universal. My claim that religious experiences have occurred in all times places and cultures can therefore initially be seen as contradictory to much recent thinking.

These postmodern approaches have opened up new possibilities of disclosing meanings in material culture, and are dominated by the use of language and text as analogies or metaphors for understanding humans and the world (Buchli, 1995). One of the problems of this reliance on text and language is that meaning is internalised, that is, symbols can “never escape from the human realm, can never stand out recalcitrant to human purposes” (Gosden, 1994: 55). Meaning does not exist in the world but is created by language, and therefore “does not arise from contact with the world” (Gosden, 1994: 57). However, I would argue that the way in which we engage with and encounter the world, is through practice. If we are told continuously that universals are essentialist and do not exist, we may soon find ourselves “wondering whether there is really anything out there, or at least anything quite so fascinating as ourselves” (Eagleton, 1996: 12). There is perhaps a danger of being “trapped within in the prison house of our discourse”, and in this sense language can also be an obstacle (Eagleton, 1996: 12). Language is a system of symbols by which we communicate, which we cannot dispense with, but we can also be victims of these systems. I agree with Huxley that we need to be able to intensify the way we look at the world directly and “not through that half-opaque medium of concepts” which distorts our understanding (Huxley, 1994 [1954]: 52).
From the standpoint of this study, it seems that many post-processual approaches do not fundamentally alter the nature-culture paradigm, they simply represent the 'culture' side of the coin as opposed to more economically or environmentally determined processual approaches. Both types of approach have great strengths, but their analytical and interpretative abilities are actually predicated on the creation of a gap between people and the world, and by their concentration on language, I suggest some post-processual approaches tend to intensify this problem. Although humans as material creatures consist of the same natural elements, postmodernism "foolishly suspects all talk of nature as insidiously mystifying, and overestimates the significance of cultural difference" (Eagleton, 1996: 14). This is evident in the interpretative work of Geertz, who avoids the significance of the (universal characteristics of the) sacred in his definition of religion, which as a consequence, "is so lacking in focus that it could apply to secular ritual or even to the system of values which is used to uphold a monetary economy" (Renfrew, 1994: 48).

I have therefore deliberately eschewed the basis of these approaches, and have attempted to place the human beings of past societies in a material world, but not one based on the Western separation of economics and religion. This has meant a reliance on ethnographic evidence. Extrapolating in a general way from ethnographic evidence is a good way of finding alternative approaches to problems in prehistory, but these have nearly always been reworked to fit existing Western assumptions. Even postmodern approaches that recognise and stress minority views and the authenticity of other voices or modes of thought, in effect open the door only to immediately slam it shut again, by assuming them to be particular mental cultural constructs. I have attempted to take such ethnographic evidence at its word, for "the true understanding of another should hold open the prospect that the other's conceptions may inform our own, and thereby extend and/or modify our own conception of rationality" (Tambiah, 1990:121).

We therefore need to recognise the historical basis of our own beliefs, and the reason that we cannot understand the beliefs of other societies may be because we lack the appropriate frameworks, and not because others are necessarily wrong. As a consequence of this relative failing, we fail to recognise the ineffable, and the "acts of being directly aware of the given facts of our existence, are almost entirely
ignored" (Huxley, 1994 [1954]: 53). This does not mean that Huxley disowns systematic reasoning, far from it, but that we also need to be aware of another form of being human, beyond our normal understanding, but which can be “totally comprehended” (Huxley, 1994 [1954]: 53). In academic terms this is about context: individual, social, and environmental contexts. We either look at one or two but rarely all three together, and if we do, the environment is still something external, out there. I now hope to show that by looking at the different contexts, we can test the validity of the ethnographic, religious and dowsing evidence, and its relevance to the question of sacred places.

10.3 Nature and knowledge: the reality of the sacred
It is clear that all small-scale non-industrial societies believe in a spiritual force or sacred power that is immanent throughout the landscape. For hunter-gatherers and other non-industrial societies, the natural environment is the main constant of their lives. In these societies there are more opportunities for undistracted contemplation of nature by individuals, within, and mediated by social contexts that already value the natural environment. If this explanation sounds circular, that is because it is: the one mediates and allows the other. Learning to see is not a matter of acquiring the cultural schemata “for mentally constructing the environment, but of acquiring the skills for direct perceptual engagement with its constituents, humans and non-human, animate and inanimate” (Ingold 1996: 141-2). So if a hunter-gatherer notices aspects of the environment that go unnoticed by the Western observer, it is not because they exist in the mind of the individual, but because hunter-gatherers are more attuned to picking up information which is critical to their well being or cultural appreciation of the environment. The “information is not in the mind but in the world” (Ingold, 1996: 142). Knowledge is gained through this involvement, so hunter-gatherers are ‘at home’ in the world, and it is no more a wilderness for them than is the built environment for the urban dweller. They are both landscapes of everyday life (Ingold, 1996: 144). Small-scale societies understand the world that way because they live that way. It is a form of knowledge and should not be reduced to mere belief.
By comparison, our own society is largely urban or suburban based, which tends to remove immediate and day to day engagement with the natural environment. This is compounded by our reliance on technology based on a quite different set of values, so “we have been trained to merge our emotions and beliefs so that they mesh with the machines and institutions of the civilized world” (Deloria, 1993: 36). Does this mean that small, non-industrial, societies’ understandings of land and its sacredness are somewhat more profound than that of Western industrialized cultures generally are? It has been suggested that what is deemed to be the tribal wisdom of native Americans, for example, is actually not much different on an intellectual scale “from insights a person with some degree of sensitivity and awareness about the world could discern upon serious reflection” (Deloria, 1993: 29). But there is much more to it than this, as the understanding and appreciation are also based on the experience and cultural heritage of the community (Momaday, 1976). Similarly, for Deloria, tribal wisdom is the “distilled experiences of the community, not the aesthetic conclusions of sensitive individuals or the poetic conclusions of personal preferences” (Deloria, 1993: 29).

The main point, then, is that knowledge and understanding of the holy arise from long occupation of the land, and the generations of individual, and collective synthesising of the experience (Deloria, 1993: 29). It is from this long occupation that there arises a “real apprehension of and appreciation for the sacredness of land, and more specifically, for the sacred nature of places” (Deloria, 1993:29). The characteristics of religious knowledge amongst native Americans and other ethnographic evidence (Carmichael et al., 1994), tally with what we now know and recognise as mystical experiences from the work of James (1945) [1902], Otto (1950) [1917], and analysis by Stace (1960) and Franks Davis (1989). Criticisms that can be made concern the varieties of religious experiences: a phenomenological analysis of these does indicate a difference between, say “an expression of demonic dread and the Buddhist experience of Nirvana” (Almond, 1984: 85). Are these fundamentally different experiences, of kind, or degree? An historical comparison of the different types of experiences does show a set of overlapping characteristics, constituting a ‘common core’ (Franks Davis, 1989: 173-5; Stace, 1960). I suggest that there are a number of other factors that can help explain the variations that
remain, and religious experiences need to be understood not only from the individual psychological or social context, but also as part of human:environment relations.

I am therefore suggesting that our own Western individual, social, economic and environmental contexts form distractions which tend to deny opportunities for religious experiences. It does not mean that religious experiences are impossible under these conditions, but that they may be less likely in everyday contexts. If they do occur, there is no wider social context in which individuals can make sense of the experience. That is because our understanding of land and nature as object is channelled and filtered through our technology, “consequently we attribute to landscape only the aesthetic and not the sacred dimension” (Deloria, 1993: 37). Analysis by James (1945) [1902], and psychological surveys of present day populations (Beit-Hallahmi and Argyle, 1997), that are largely urban and suburban, still show ‘places in nature’ are amongst the most common for initiating experiences (Franks Davis, 1989: 59). But these psychological surveys assume that such experiences are ‘all in the mind’. This is because modern psychology is still based on the nature:culture dichotomy, the separation of person and place. As a result, “the relationship between sacred places in nature and transcendental experiencing is not at all understood in modern psychology” (Swan, 1990: 80). This fact has often been the stumbling block. How can something external to the person be felt?

In this respect, I would like to develop some aspects of the work of Ingold and the model of direct perception outlined in Chapter Three. The important difference between Ingold’s model and the phenomenology used elsewhere may be the possibility of historical variation in the human recognition of affordances and effectivities. Ingold does not make this point, but it may be useful to think in terms of a continuum where different affordances are recognised according to particular contexts and historical circumstances. This continuum could range between participation and causality (Tambiah, 1990: 105-10).

In terms of participation, people’s engagement with the environment may vary between religious belief and unity with their surroundings (as evidenced by religious experiences), to detached scientific observation (causality) (Tambiah, 1990: 109). Historically these may range from pre-modern (and/or present-day) small-scale
societies and individuals, to individuals engaged in scientific research in the present. But science or any kind of rational mode of thought is a relatively prescribed activity: the scientist does not think or act in this mode all day, that is, from a ‘designer’ viewpoint (Ingold: 1992: 44). Engagement in different activities may move individuals to different modes of being along the continuum. In this way it becomes possible for present-day populations to have religious experiences (even agnostics or atheists). But this does not mean that they are also incapable of rational thought. These represent different cultural and perhaps physiological and psychological activities, along a continuum of engagement with the environment that does not deny an historical particularity to modes of being. It is therefore important not to set up contradictions between biological, cultural and/or environmental characteristics. We should attempt to understand universals as potentials: they are universal potentialities that are only realised by the conditions of particular contexts, and therefore represent different aspects of what it is to be a human being.

Direct perception may therefore give some indication of how individuals are able to apprehend the sacred as an ‘objective’ reality. “It is a transcendence belonging to another order than the human, and yet it may be present to us as a felt immanence, an experienced participation” (Huxley, 1994 [1954]: 53-4). Following the developments in quantum theory in the twentieth century, some of the traditional deterministic models originally believed to explain the workings of the universe derived from the Cartesian-Newtonian framework, were undermined. “Natural science does not simply describe and explain nature; it is part of the interplay between nature and ourselves; it describes nature as exposed to our method of questioning. This was a possibility of which Descartes could not have thought, but it makes the sharp distinction between the world and the I impossible” (Heisenberg, 1959: 75). Nature is not to be understood by “studying the behaviour of its smallest component parts”, but rather it “is the whole that determines the behaviour of the parts” (Willis, 1990: 24). We therefore need to recognise that there is a set of potentially connected elements that structure the web of human:environment relationships, and our mode of engagement with it. In quantum theory, physicists do not so much study objects, but the relationships between them (Capra, 1982: 70). There is now some possible philosophical convergence between elements of quantum theory and mystical knowledge (Weber, 1986). Many areas of study are moving to a view that “person
and environment embrace an irreducible system”, and we are as much part of it as it is part of us (Descola and Palsson, 1996: 18).

The traditional nature:culture framework does not allow this possibility, and as a result the various interpretations of religious experiences cannot be properly accommodated. For example, there is “a gaping hole in modern psychology, the void in our understanding of how the mind and nature interact” (Swan, 1993: 80), that fails to acknowledge developments in modern physics. Although some similar transcendental experiences can be reproduced in laboratory conditions, for most of the known historical examples, the “physical places which have triggered the experiences have been of far more importance than for the vast majority of inner-space travellers studied today” (Swan, 1990: 80). The natural environment would therefore seem to provide the space and context in which distractions can be avoided, and the history of religious experiences testifies to this fact. Identification of the properties of places may be significant here.

Understanding our relationship to the environment is important in appreciating the dowsing evidence. Physics also provides a theoretical framework for understanding water divining, and the localised effects of underground water have been measured and analysed by a variety of methods (Maby and Franklin, 1939). This evidence showed that the level and intensity of affects could vary according to the weather, the hour of the day, and the lunar cycle. But it can be shown without doubt that the reactions claimed by dowsers have a physical basis (Maby and Franklin, 1939: 421). It is known that there are concentrations of negative ions in the atmosphere above subterranean streams, and negative ions can penetrate the body via the respiratory system “providing extra energy for electrochemical interactions” (Beal, 1993: 286). It can also be shown that sensitivity varies amongst individuals, some having reactions without the use of a rod or indicator. Some of these reactions are also unpleasant, or violent, even causing loss of consciousness (Maby and Franklin, 1939: 25; Tompkins, 1899: 21).

It would be wrong to draw direct parallels between these dowsing experiences and those of indigenous peoples at their sacred places, although interestingly some certainly bear comparison (see Mohs, 1994: 195; Radmilahy, 1994: 88). Swan
suggests that the “special ambience we sense at some sacred places is at least partially attributable to environmental conditions” (Swan, 1993: 79). For example, to the men of the Old Testament the holy was “like a hidden force of nature, like stored up electricity, discharging itself upon anyone who comes too near”, and the arbitrary and incalculable nature of this ‘deity’ was understood as an “indispensable” nature element of holiness (Otto, 1950: 18). The arbitrary nature of the ‘Wrath of Yahweh’ had nothing to do with moral qualities or ethical standards, and this has been constantly remarked upon (Otto, 1950:18). In other words there is not necessarily anything obviously religious about some of these experiences (James, 1945 [1902]: 60). We should not therefore overlook the possibility that some places deemed to be sacred are so venerated because of the way particular individuals interact or are affected by natural phenomena. This provides not so much a reductionist explanation, but an attempt at rationalization. That what has been characterised as supra-rational, unique feelings, the holy or sacred, may in part, be a set of naturally-occurring effects (of human:environment interaction), which in the appropriate combination of contexts, individual, social and environmental, give rise to quite extraordinary experiences.

In this sense, the historical record and the indigenous understanding of the sacred differ markedly from the conception of the sacred or holy espoused by New Age thinking. We must not confuse them. In some respects New Age beliefs are another manifestation of the postmodern outlook: instead of a fragmentary, chaotic, multi-voiced world of instant consumption, there is a reactionary need for “personal or collective identity, the search for secure moorings in a shifting world” (Harvey, 1990: 302). However, the idea and knowledge of the holy that I have described throughout are not the equivalent of personal spiritual development, marketed under the banner of ‘mind, body, and spirit’. One of the complaints native Americans have against the Western and New Age understanding is “the tendency to reduce the holy to a subjective category of experience” (Deloria, 1993: 36). The holy cannot just be what you want it to be. Such a view ignores the role of the environment and the social context in which such experiences occur. It also ignores the nature of the “objectification of the holy”, sensed as something external to the Self (Deloria, 1993: 36).
There is another aspect of postmodern thought that is certainly relevant here, and that is the way identities and associations with place have become important. Is it any surprise that during this period of ‘postmodern culture’ since the middle of the 1970s to the present, there has been a rise of interest of the importance of the concept of the place for geographers (Harvey, 1990: 302). The central concern of this work, with its interest in sacred places, can also be seen in part to be a product of these developments, and it is useful to locate the study within its historical context. In contrast, the study of the sacred is one of the oldest questions, and has a demonstrably long history: it is literally the ‘perennial philosophy’ (Huxley, 1974) [1946]. The argument presented here has therefore attempted to instigate a reassessment of the role of the sacred in archaeological interpretations through an analysis of the specific characteristics of religious experiences. Although I have highlighted the religious side of the question, it has been to show how it is relevant to understanding the economics and subsistence practices of past societies. The long-term historical nature of the evidence presented here has shown that these are relevant questions to ask of the past.

10.4 Conclusion

There have been three main themes to this study, which can primarily be reduced to the relationship between land, people and religion. I have demonstrated that what builds a common thread between them is the nature of our relationship to the environment. The main reason we find it difficult to make this connection is that this knowledge derives from subsistence practices and direct experience of the land over a long period of time. We no longer live that way. “Reverence or piety in the sense of awe toward a power that commands propitiatory rites has disappeared from the modern world. It is no great loss. We are left with the higher sentiment of compassion” (Tuan, 1976: 13). Propitiatory rites are (and were) in effect, bribes, atonement’s for offending acts. My interpretation of the universal reality of the sacred, applied in this case to the Mesolithic and Neolithic in north-west Europe, can and should be, regarded as relevant to other periods. Such a conclusion runs completely counter to many interpretative approaches, which stress the particularity of context. For them, there are no big mysteries or large underlying problems: to seek for foundations, of problems or meanings in deep structures is seen as a loss of nerve.
"an attempt to reintroduce stable, ahistorical categories" (Gosden, 1994: 59). However to state there are no ‘universals’ is itself a universalising statement.

However, I do not think the concept of the sacred, or in its practical manifestation, geopiety, is an inflexible one, or that knowledge and interpretation of religious experiences were equal in all times and places. The different individual, social, and environmental contexts provided the framework for both the experience and interpretation. In some respects, this study has therefore attempted to return to a form of long-term history. Although I have used evidence from different disciplines, I cannot claim expertise in any of those subjects, and the interpretations have been from an archaeological perspective. The recognition of the historical specificity of different contexts, but also of the identification of slowly changing patterns underlying them, is something that archaeology should be uniquely qualified to detect. As a discipline we sit astride the nature:culture divide and our subject, ‘material culture’, holds both in tension. These elements, combined with an historical approach, should make archaeologists uniquely aware of universals and particulars, but the contradictory manner in which these are often approached at present means this can only really be achieved if we move beyond the traditional assumptions. This will enable us to overcome the separation of religion from economics and the environment in our interpretations of the past. In the present, it could help us to heal the division between humans and the world, but that is another subject.
BIBLIOGRAPHY


Avens, R. (1970) *Mircea Eliade’s Conception of the Polarity ‘Sacred-Profane’ in Archaic Religions and in Christianity*. Fordham University. High Wycombe,


276


Maby, J.C., and Franklin, T. B. (1939) The Physics of the Divining Rod. London, Bell and Sons Ltd.


281


Merle, L. (1933) *Radiesthésie et Préhistoire*. Published privately.


Notes section, PSANHS (1931) *Proceedings of Somerset Archaeological and Natural History Society*: 31: xlv.


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